New Syllabus

Primary Mathematics

5B WORKBOOK 2

Consultants:
Dr Foong Pui Yee • Dr Fan Liang Huo

Authors:
Teh Pick Ching (BA, MA) • Lu Jitan (Ph.D, MSc, BSc)

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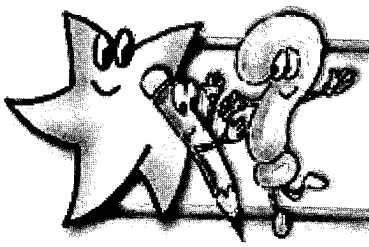

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12. Triangles

13. 4-Sided Figures

11 Volume

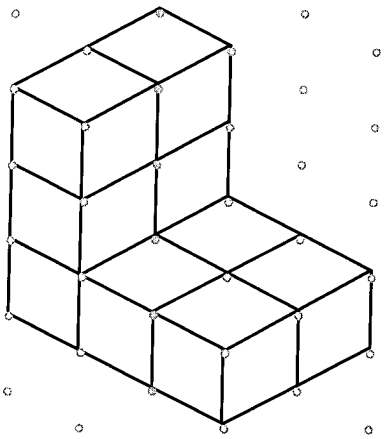
WORKSHEET 36

Cubes and Cuboids

Date:

1. Write in the box provided if the figure is a cube or a cuboid. Otherwise, draw a cross in the box.

(a)



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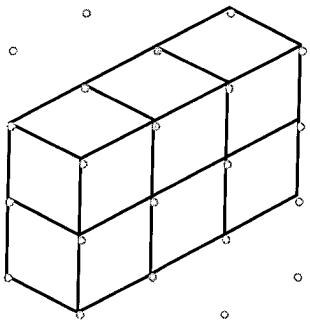

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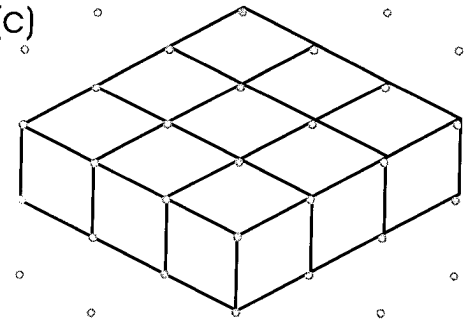

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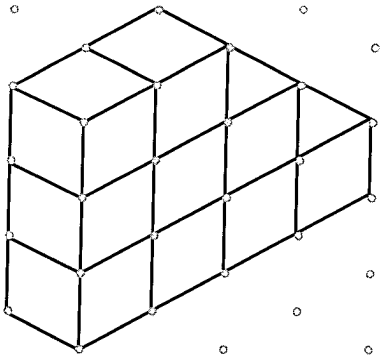

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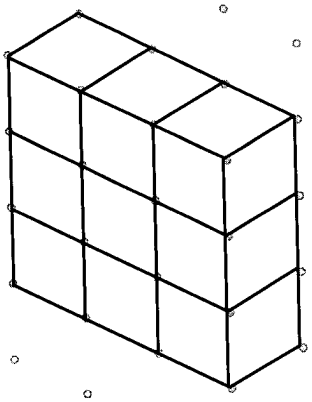

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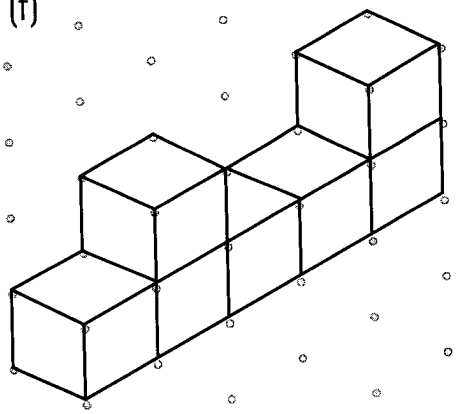

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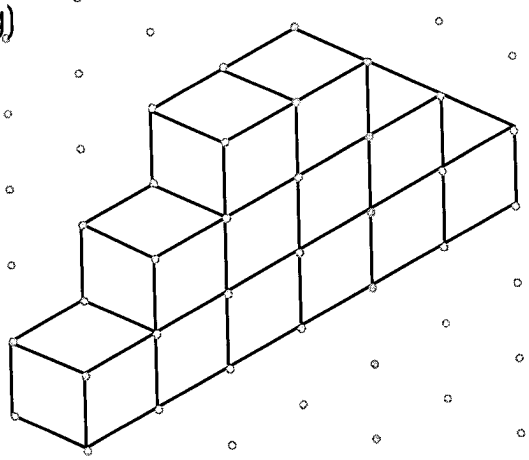

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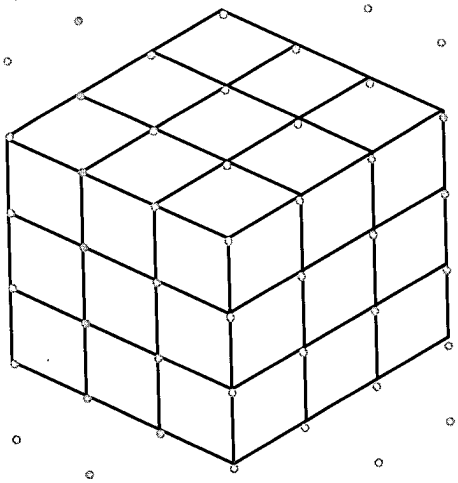
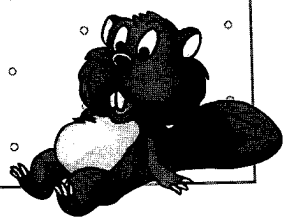
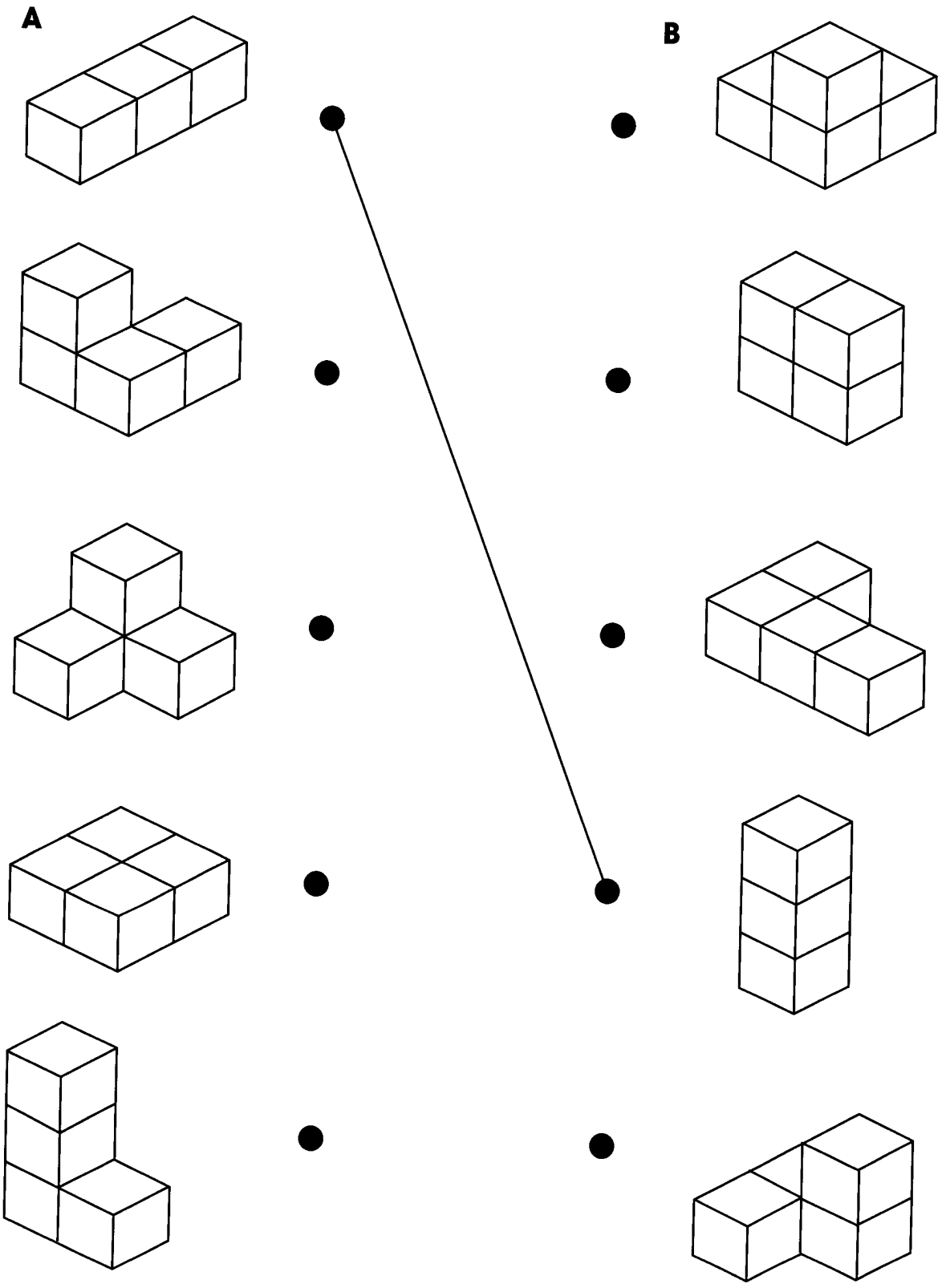


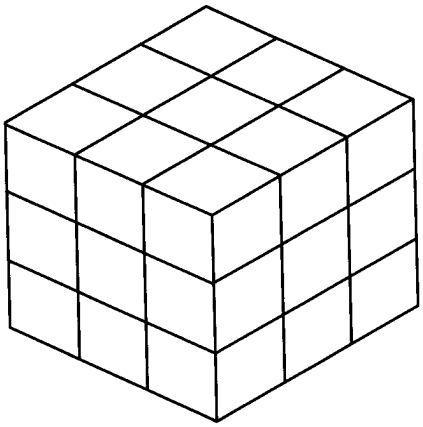


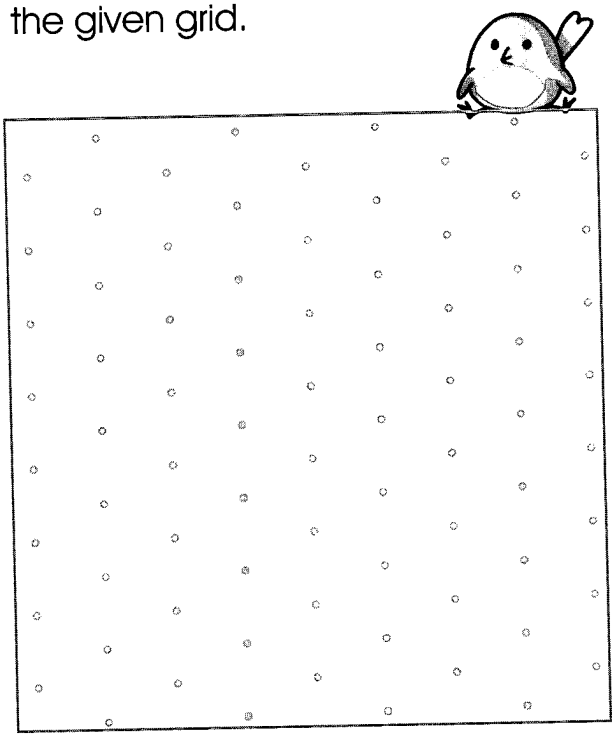
2. Match each solid in column A with the one which has the same shape in column B. The first one has been done for you.



3. Copy the cube and cuboid onto the given grid.

(a)





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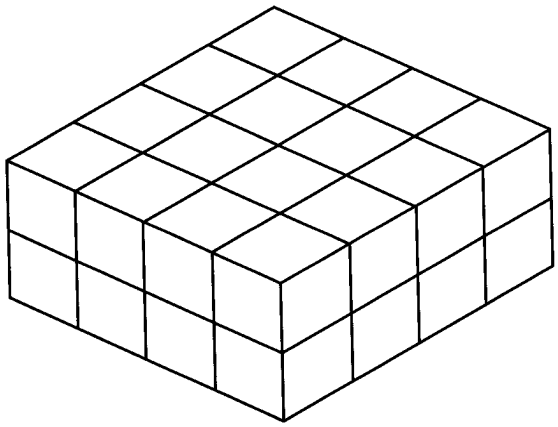

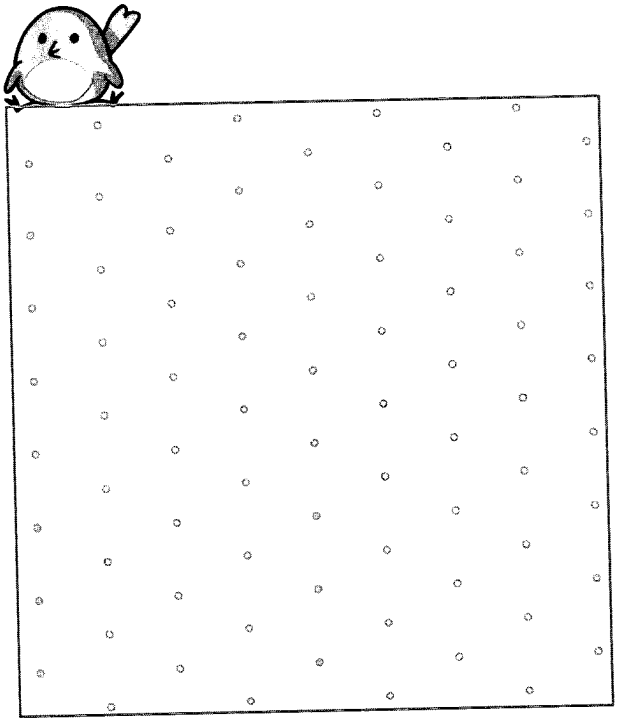

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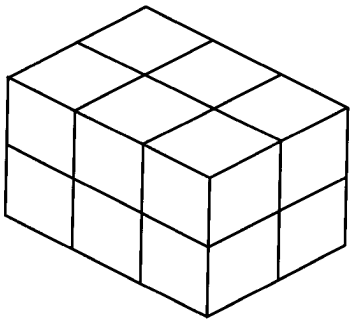

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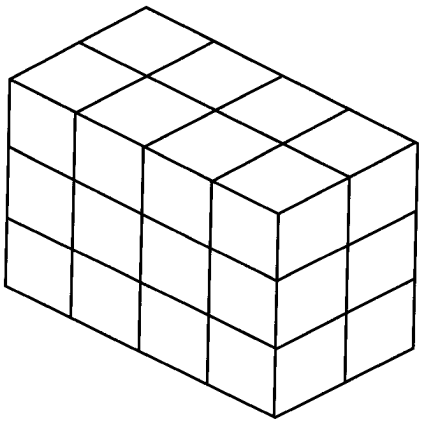
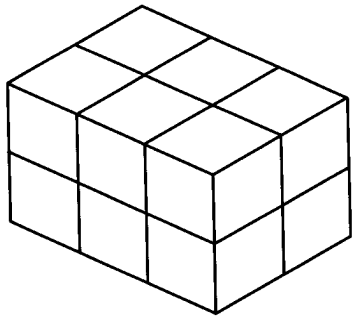


WORKSHEET 37

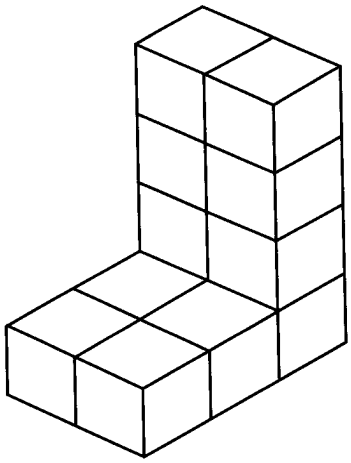
Date: _____

Volume and Cubic Units

1. The following solids are made up of 1-cm cubes.



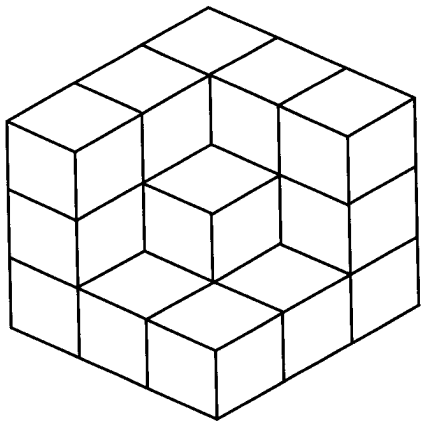
A



B

(a) Complete the table.

	Number of 1-cm cubes
A	
B	
C	



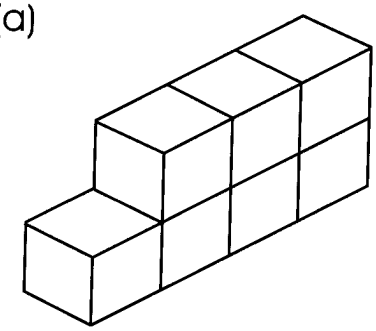
C

(b) Solid _____ and Solid _____ have the same number of 1-cm cubes.

(c) Solid C has _____ more 1-cm cubes than Solid A.

2. The following solids are made up of 1-cm cubes. Find their volumes.

(a)

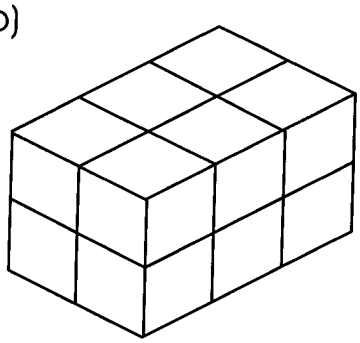


Total number of cubes = _____

Volume = _____ × _____

= _____ cm^3

(b)

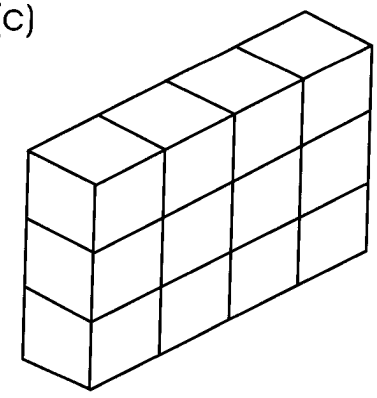


Total number of cubes = _____

Volume = _____ × _____

= _____ cm^3

(c)

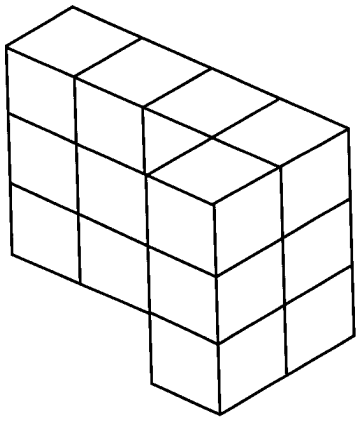


Total number of cubes = _____

Volume = _____ × _____

= _____ cm^3

(d)

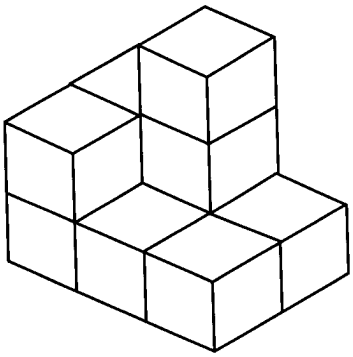


Total number of cubes = _____

Volume = _____ × _____

= _____ cm^3

(e)

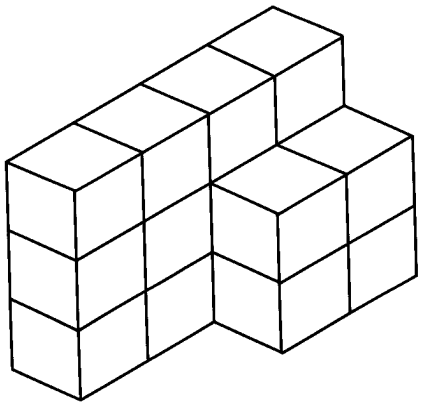


Total number of cubes = _____

Volume = _____ × _____

= _____ cm^3

(f)



Total number of cubes = _____

Volume = _____ × _____

= _____ cm^3

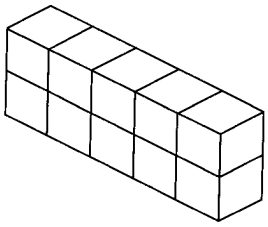
WORKSHEET 38

Date:

Volume of Cuboids and Cubes

1. The following cuboids are made up of 1-cm cubes.
(i) Find the volumes of the following figures.
(ii) Complete the table.

(a)



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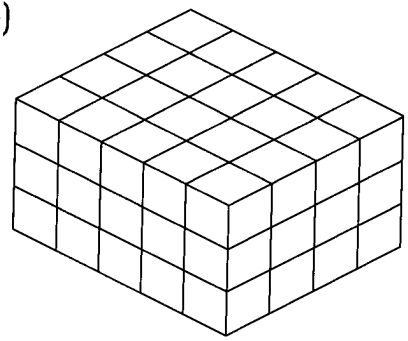

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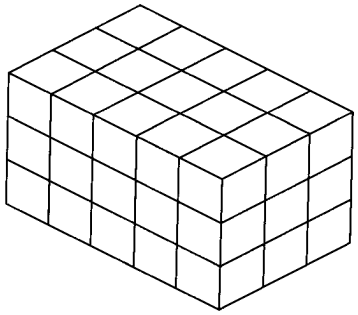

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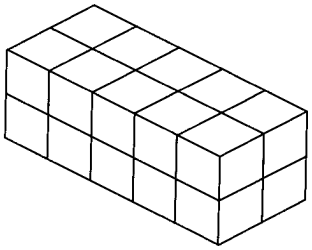
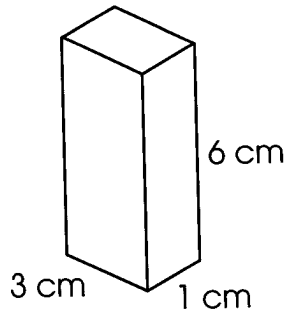
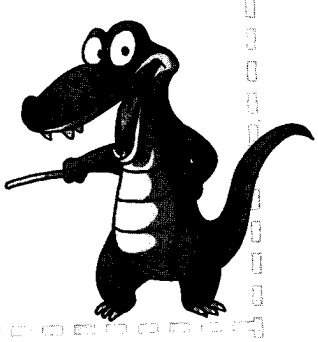


Solids	Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)
a	5	1	2	10
b				
c				
d				

2. Find the volume of each cuboid. Show your working clearly.

(a)





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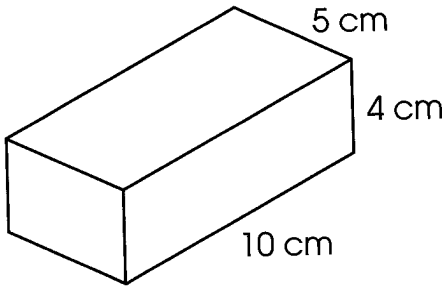

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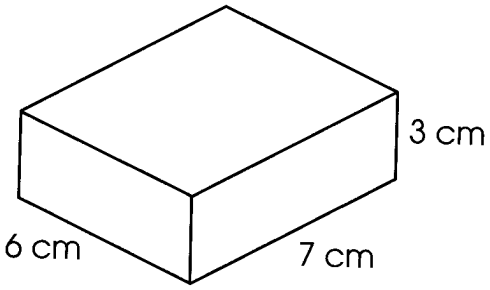

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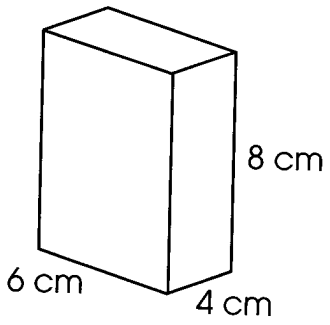

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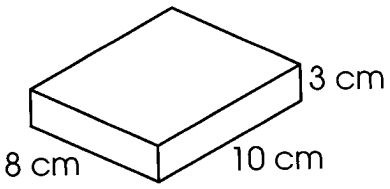

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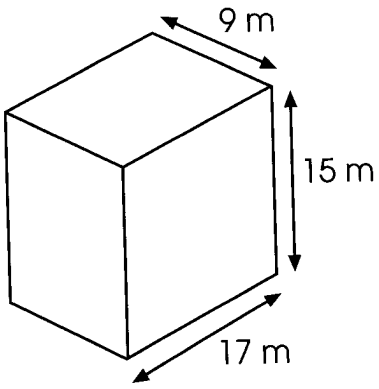

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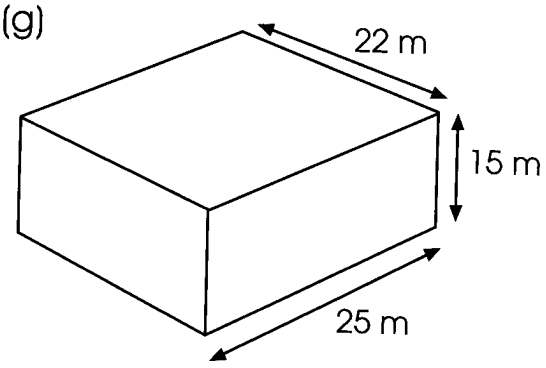

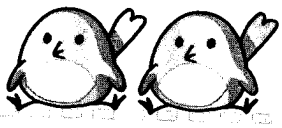

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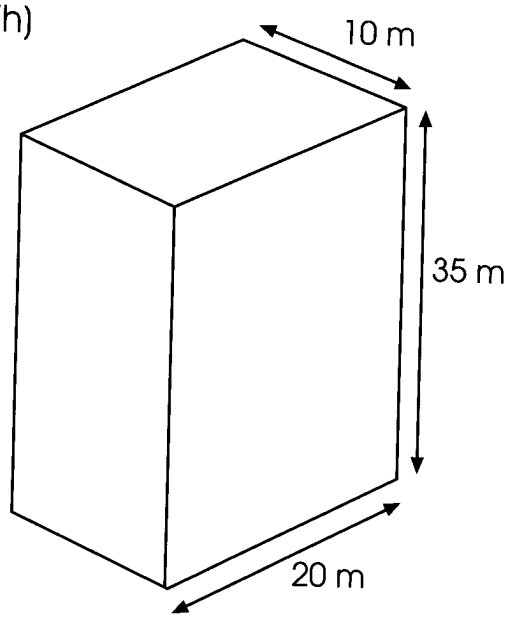
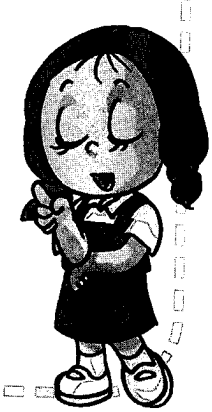




WORKSHEET 39

Date: ____

Volume of Liquid

1. Fill in the blanks.

(a) 650 ml = ____ cm^3

(b) 2.5 ℓ = ____ cm^3

(c) 1400 cm^3 = ____ ml

(d) 3750 cm^3 = ____ ℓ

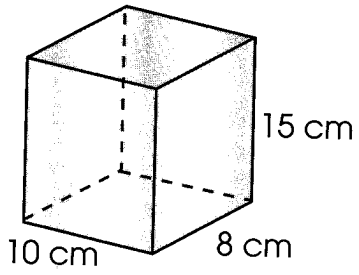
(e) 8500 ml = ____ cm^3

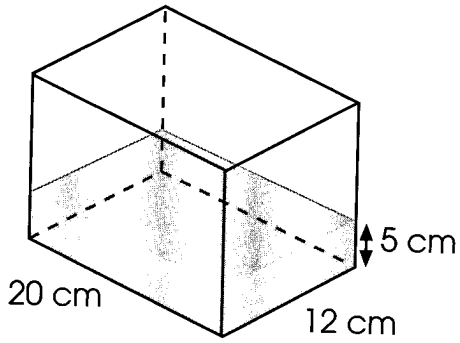
(f) 0.35 ℓ = ____ cm^3

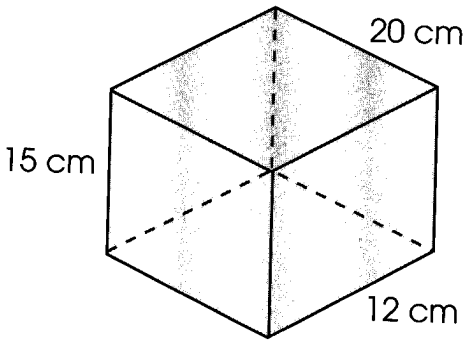
(g) 7235 cm^3 = ____ ℓ

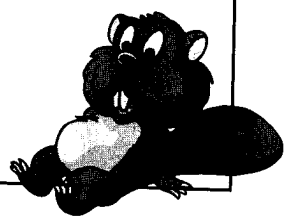
(h) 320 cm^3 = ____ ml

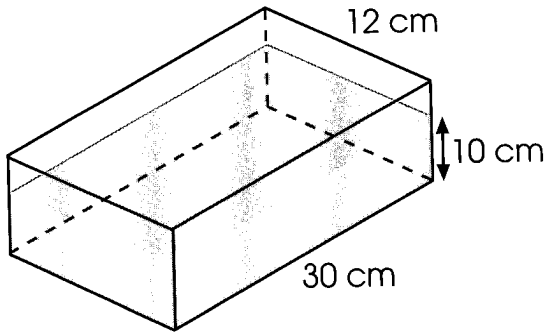
2. Find the volume of water in each of the containers in litres. Show your working clearly.

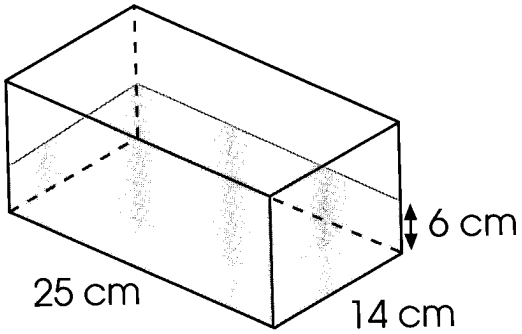


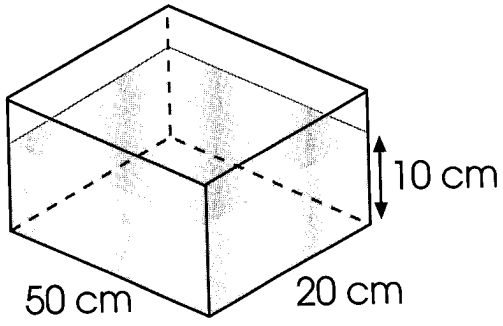




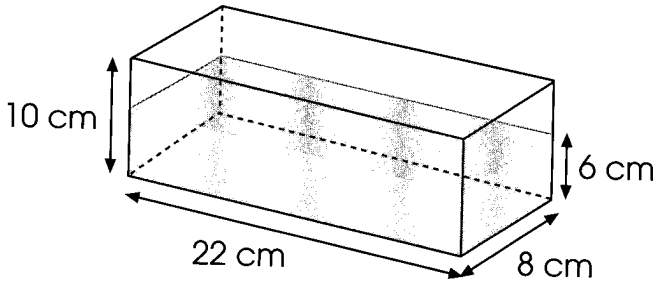



12 cm
10 cm
30 cm

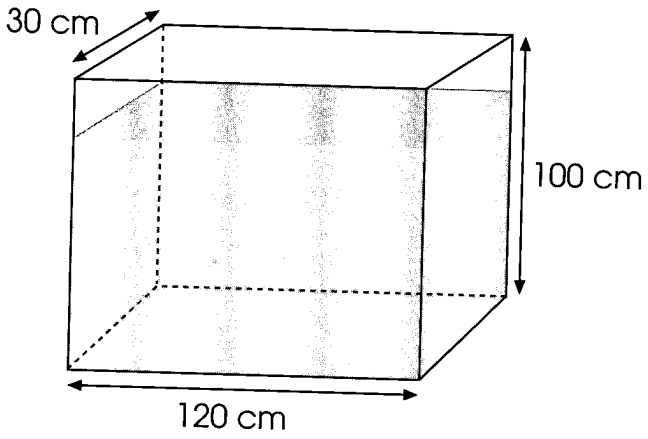

6 cm
25 cm
14 cm


10 cm
50 cm
20 cm

3. A rectangular tank measures 22 cm by 8 cm by 10 cm. Now the water level in the tank is 6 cm. What is the amount of water needed to completely fill the tank? Express your answer in millilitres.



4. The rectangular container shown is filled to $\frac{4}{5}$ of its capacity. What is the volume of water in the container? Express your answer in litres.



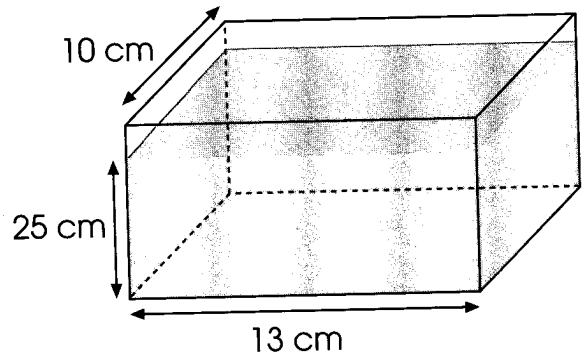
WORKSHEET 40

Date: _____

Word Problems

1. A water storage tank is 3 m long, 2 m wide and 1 m deep.
What is the capacity of the tank?

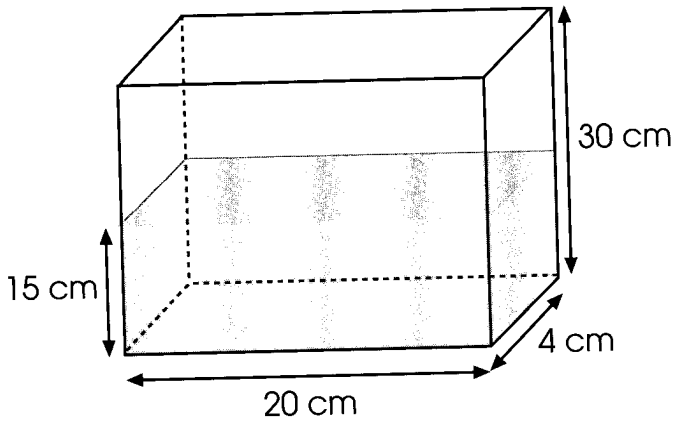
2. $\frac{5}{6}$ of the rectangular container has been filled with water.
What is the capacity of the tank? Express your answer in litres.



3. A rectangular swimming pool measures 30 m by 10 m by 2 m. How many cubic metres of water will be required to fill the pool completely?

4. The length of an atlas is 28 cm. Its breadth is 5 cm shorter than its length. The thickness of the atlas is 3 cm. Find the volume of the atlas.

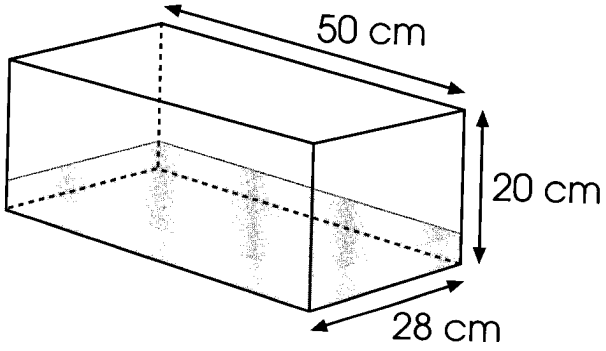
5. Water is poured into the container as shown below.
How much more water is needed to fill it up completely?

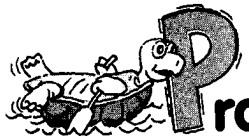


6. The height of a cuboid is 10 cm. Its length is 3 times its height and 5 times its breadth. Find the volume of the cuboid.

7. The length of a fish tank is 250 cm. Its breadth is 50 cm and its height is $\frac{2}{5}$ its length. Find the capacity of the fish tank.

8. A rectangular tank measuring 50 cm by 28 cm by 20 cm contained some water. When 10 litres of water was added, the tank was filled to the brim. How many litres of water were there in the tank at first?

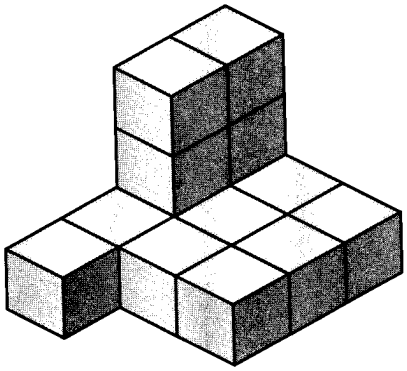




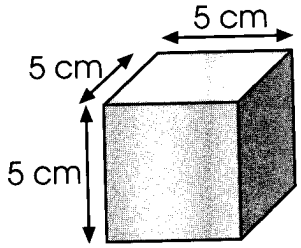
Practice 11

Date:

1. 1-cm cubes are stacked to make a solid as shown. How many 1-cm cubes are there? What is the volume of the solid?

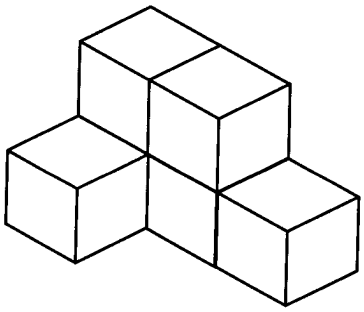


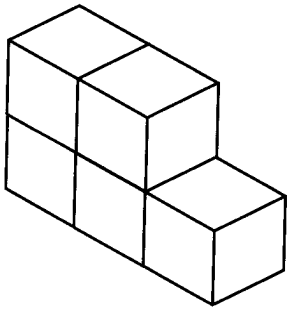
2. Find the volume of the cube as shown.



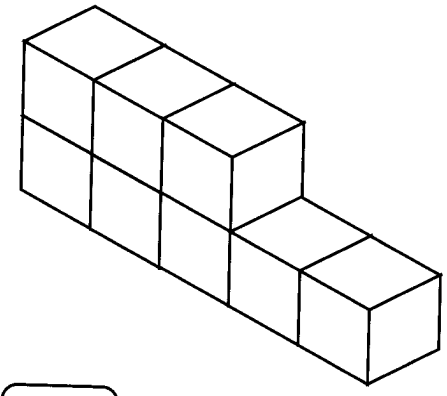
3. Tick (✔) the solid with the greater volume in each pair.

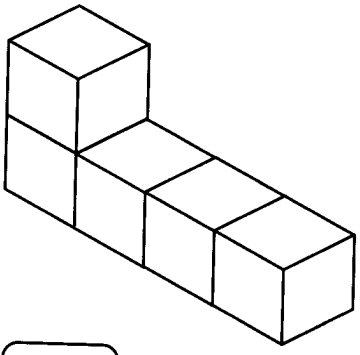
(a)



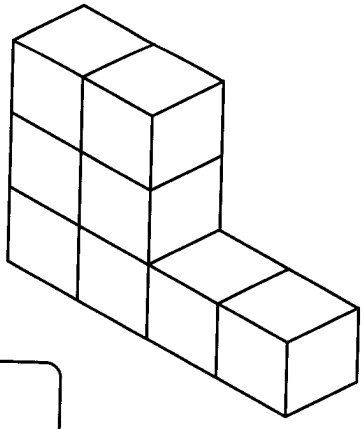


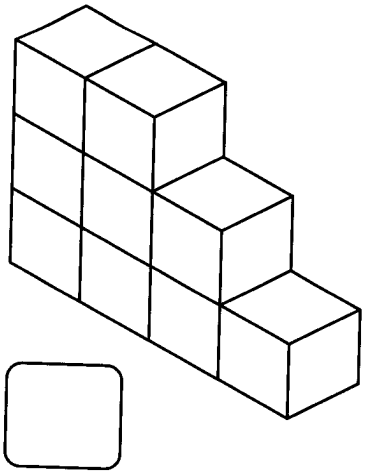
(b)



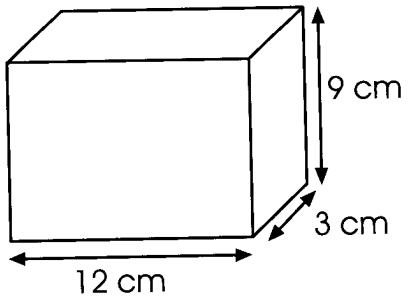


(c)

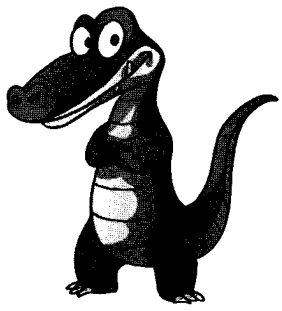




4. Find the volume of the cuboid shown.

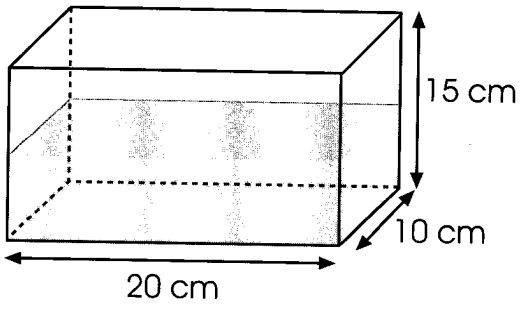


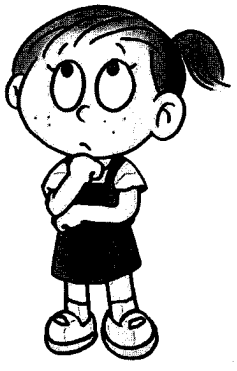
5. A rectangular tank measures 120 cm by 20 cm by 50 cm.
Find the capacity of the tank in litres.



6. The length of a fish tank is 100 cm. Its breadth is $\frac{3}{4}$ of its length and its height is 20 cm. Find the capacity of the fish tank in litres.

7. The rectangular tank shown below measures 20 cm by 10 cm by 15 cm. It is filled with water to half its height. What is the volume of water in the tank?





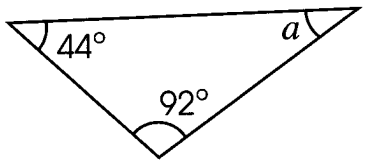
12 Triangles

WORKSHEET 41

Date: ☐

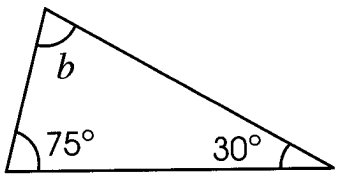
Sum of Angles of a Triangle

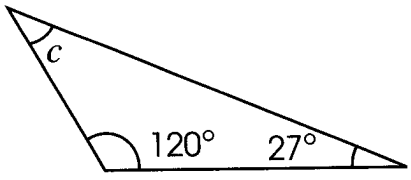
1. The following figures are **not** drawn to scale.
Find the marked unknown angles.

(a) 

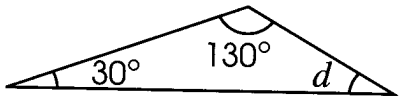
$\angle a = 180° -$ ☐ $-$ ☐

$=$ ☐

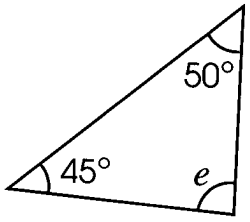
(b) 

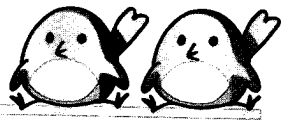
(c) 

(d)

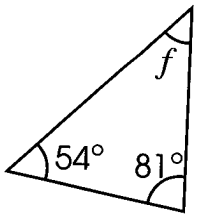


(e)





(f)

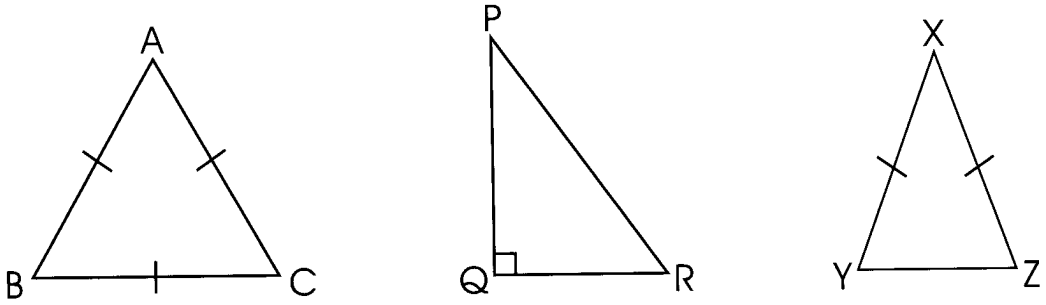


WORKSHEET 42

Date: _____

Special Triangles

1. Fill in the blanks.



Triangle ABC is a/an _____ triangle.

All sides of triangle ABC are _____.

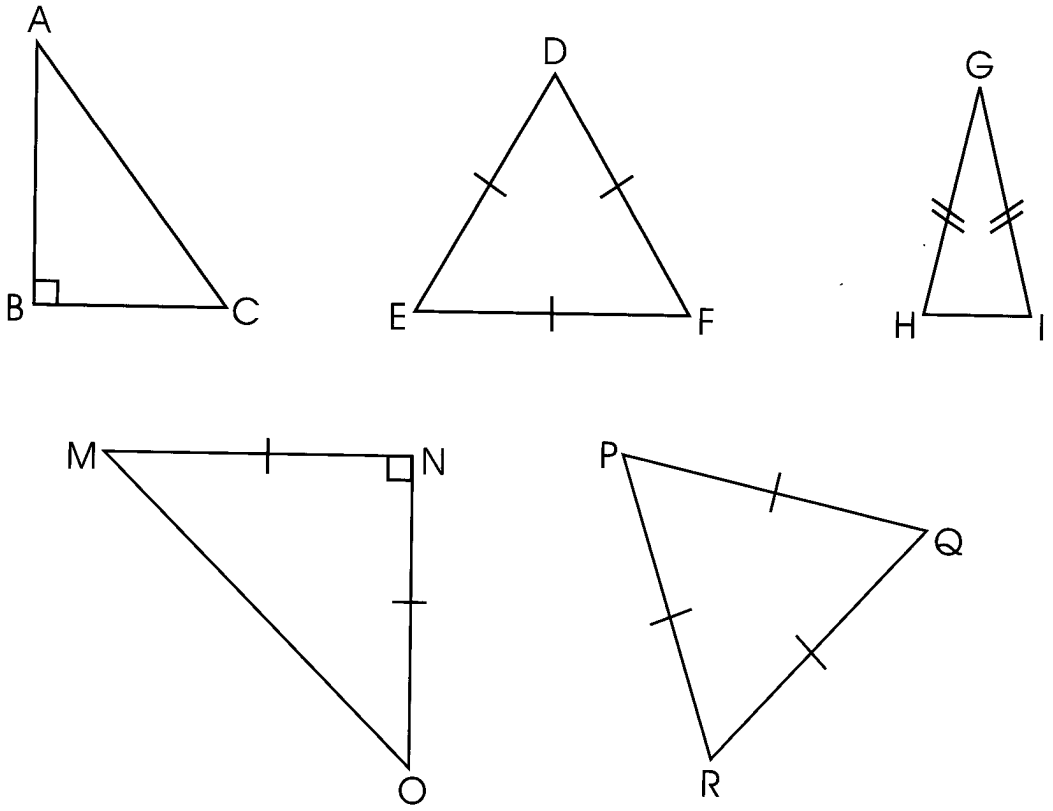
Triangle PQR is a/an _____ triangle.

One of the angles of triangle PQR is _____.

Triangle XYZ is a/an _____ triangle.

Two sides of triangle XYZ are _____.

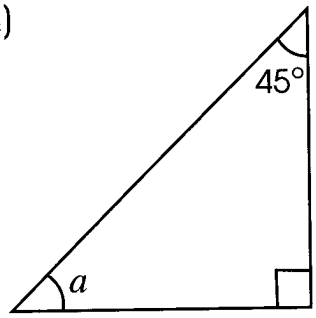
2. Study the triangles below and complete the table.



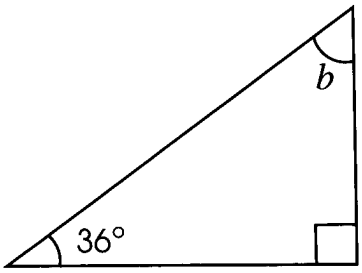
Type of Triangles	Name of Triangles
Equilateral triangles	
Right-angled triangles	
Isosceles triangles	

3. The following figures are **not** drawn to scale.
Find the unknown angles.

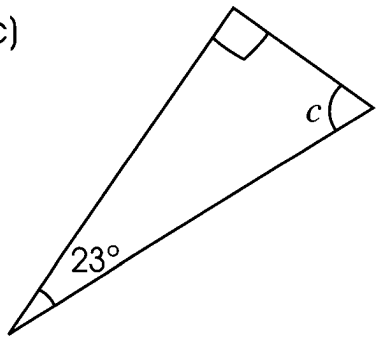
(a)



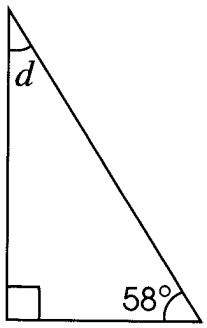
(b)



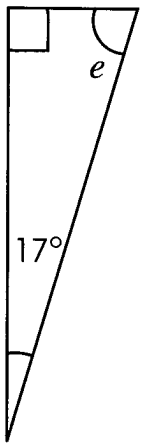
(c)



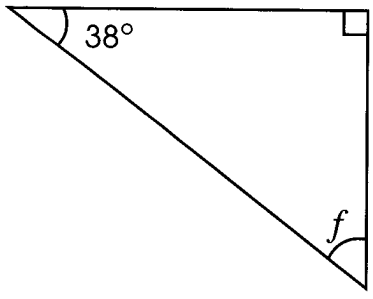
(d)

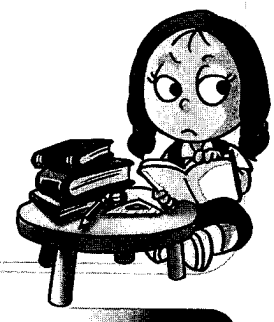


(e)



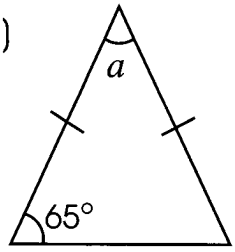
(f)



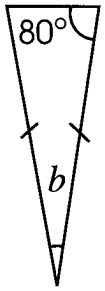


4. The following figures are **not** drawn to scale.
Find the unknown angles.

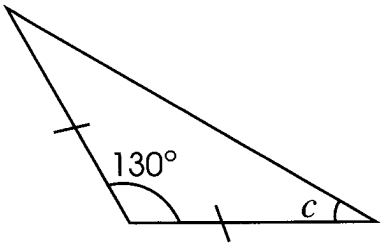
(a)



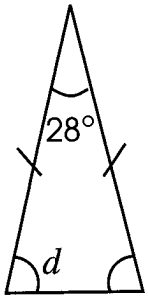
(b)



(c)

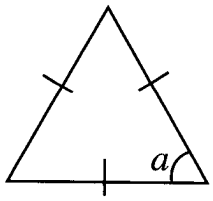


(d)

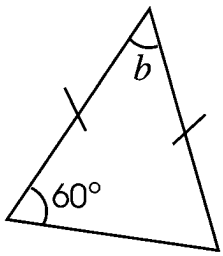


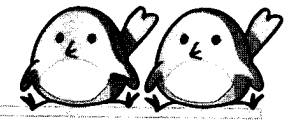
5. The following figures are **not** drawn to scale.
Find the unknown angles.

(a)

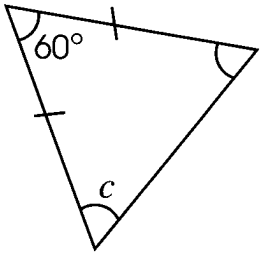


(b)

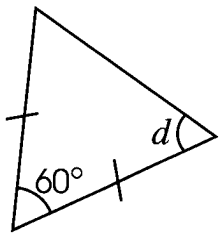




(c)

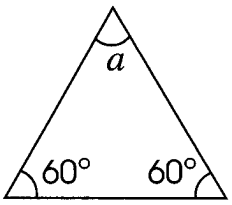


(d)

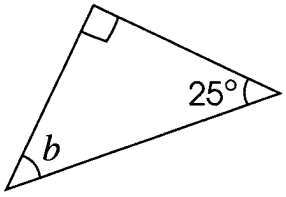


6. The following figures are **not** drawn to scale.
Find the unknown angles.

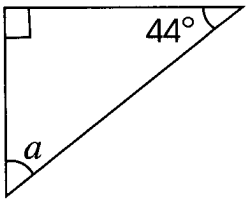
(a)



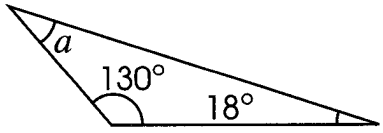
(b)



(c)

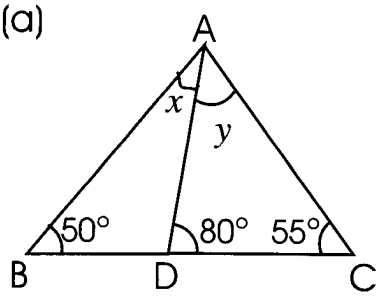


(d)

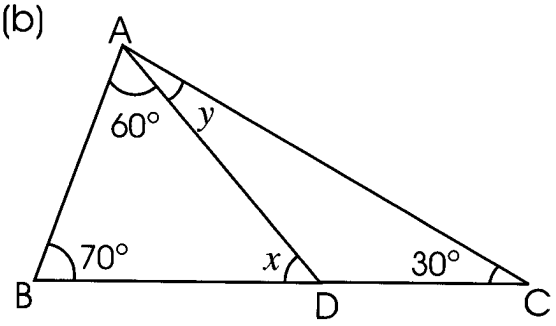


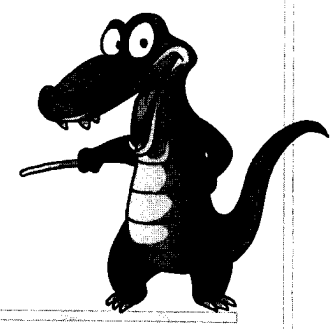
7. The following figures are **not** drawn to scale. ABC is a triangle. Find the unknown angles.

(a)

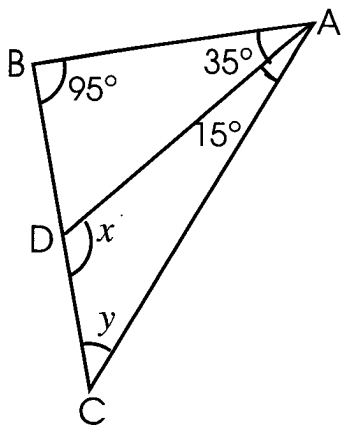


(b)





(c)

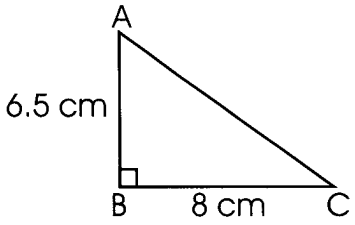


WORKSHEET 43

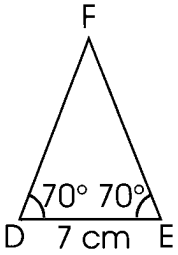
Date:

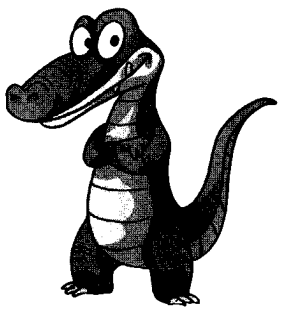
Constructing Triangles

1. Draw a triangle ABC in which AB = 6.5 cm, BC = 8 cm and ∠ ABC = 90°.

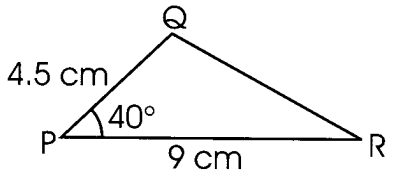


2. Draw a triangle DEF in which DE = 7 cm and ∠ DEF and ∠ EDF are each 70°.

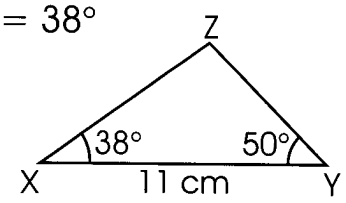


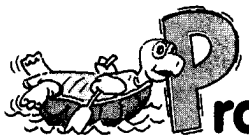


3. Draw a triangle PQR in which PQ = 4.5 cm, PR = 9 cm and $\angle$ RPQ = 40°.



4. Draw a triangle XYZ in which XY = 11 cm, $\angle$ ZXY = 38° and $\angle$ ZYX = 50°.



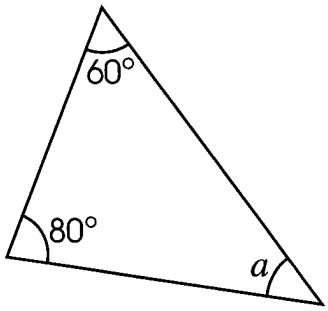


Practice 12

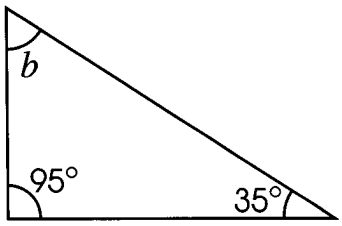
Date:

1. The following figures are **not** drawn to scale. Find the unknown angles.

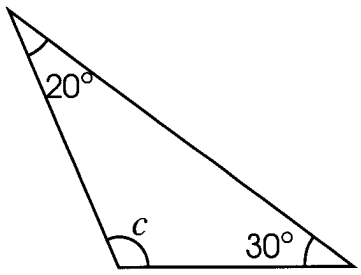
(a)



(b)

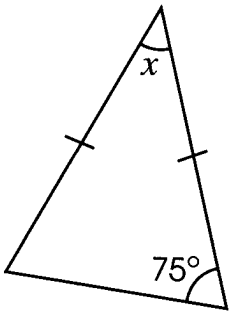


(c)

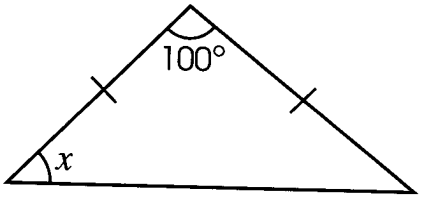


2. The following figures are **not** drawn to scale. Find the unknown angles.

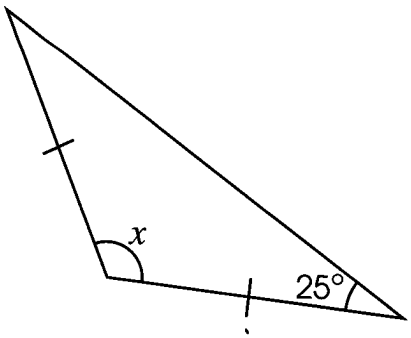
(a)



(b)

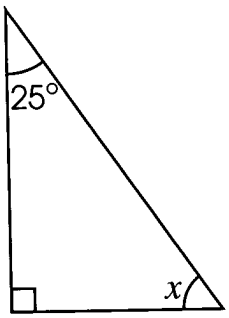


(c)

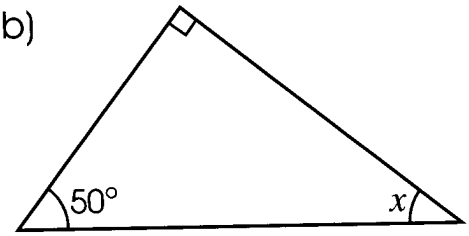


3. The following figures are **not** drawn to scale. Find the unknown angle in each right-angled triangle.

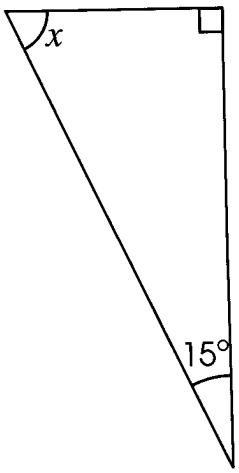
(a)

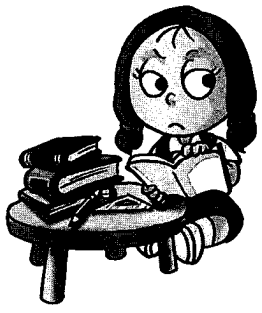


(b)

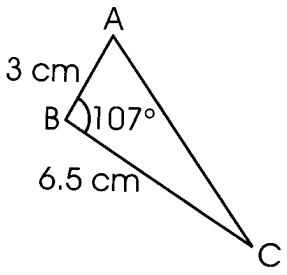


(c)

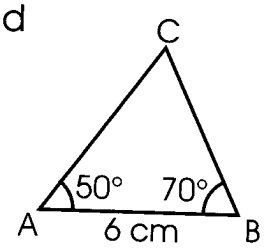




4. Draw a triangle in which AB = 3 cm, $\angle$ ABC = 107° and BC = 6.5 cm.



5. Draw a triangle in which AB = 6 cm, $\angle$ ABC = 70° and $\angle$ BAC = 50°.



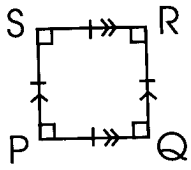
13 4-Sided Figures

WORKSHEET 44

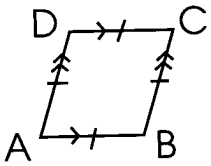
Date: _____

Identifying 4-Sided Figures

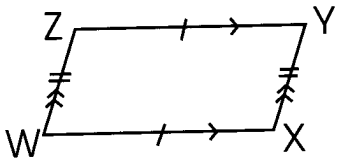
1. Study the figures below and complete the table.



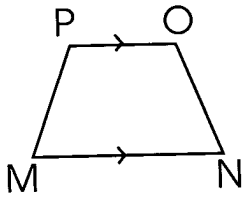
(a)



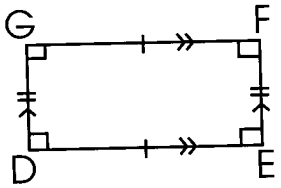
(b)



(c)



(d)

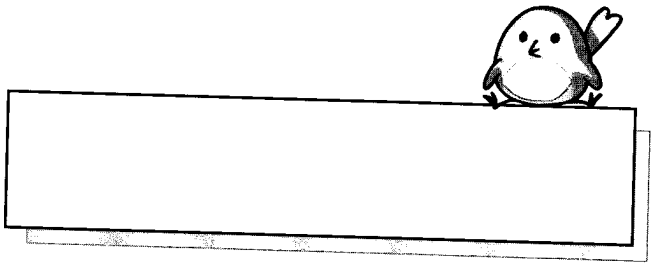


(e)

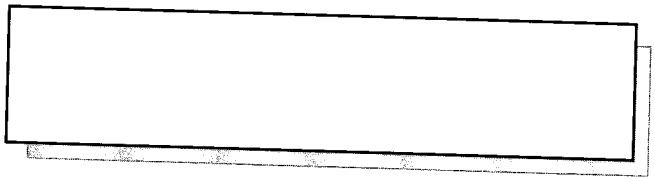
Properties	Names of figures
4 right angles	
only 1 pair of parallel lines	
2 pairs of parallel lines	
no perpendicular lines	
all sides are equal	

2. Solve the following riddles and write the names of the 4-sided figures in the boxes.

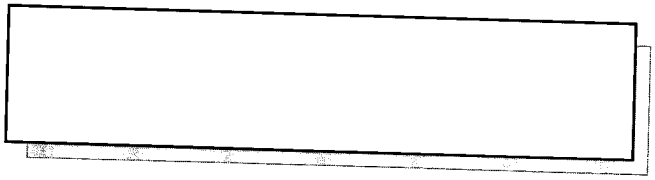
(a) All my sides are equal but I do not have any right angle. What am I?



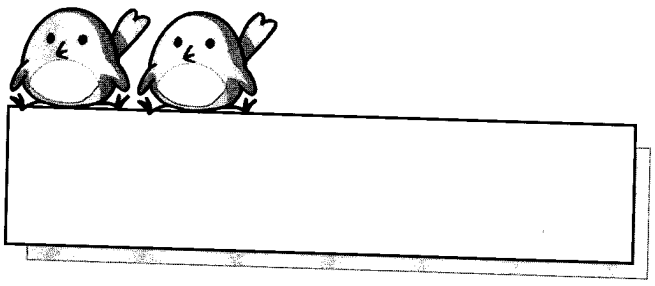
(b) All my sides are equal and I have 4 right angles. What am I?



(c) I have 2 pairs of parallel lines but I have no perpendicular lines. I do not have 4 equal sides. What am I?



(d) I have 4 sides and 2 of my sides form a pair of parallel lines. What am I?



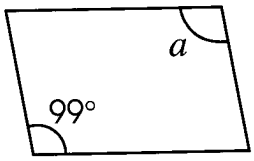
WORKSHEET 45

Date:

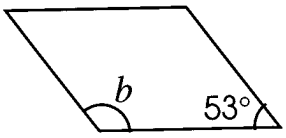
Properties of 4-sided Figures

1. The following parallelograms are **not** drawn to scale.
Find the unknown angles.

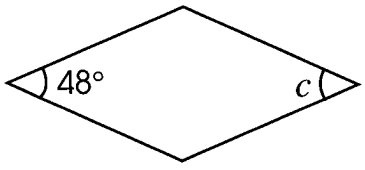
(a)



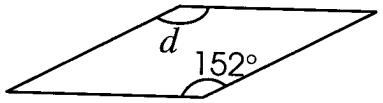
(b)



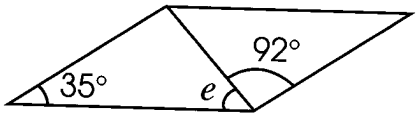
(c)



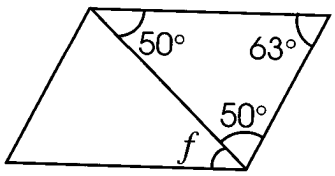
(d)



(e)

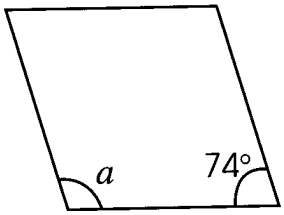


(f)

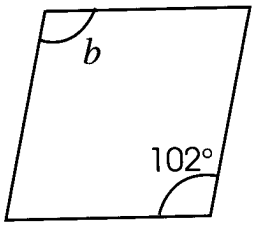


2. The following rhombuses are **not** drawn to scale.
Find the unknown angles.

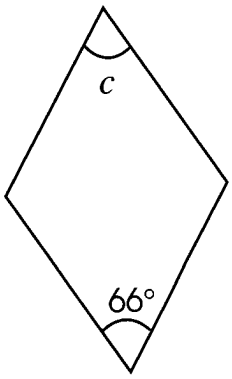
(a)



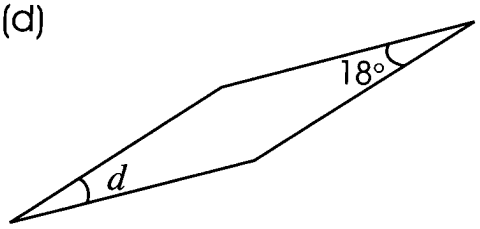
(b)



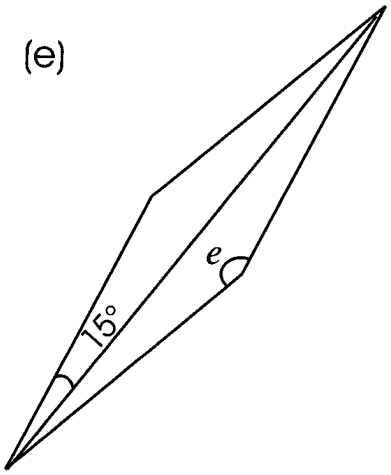
(c)



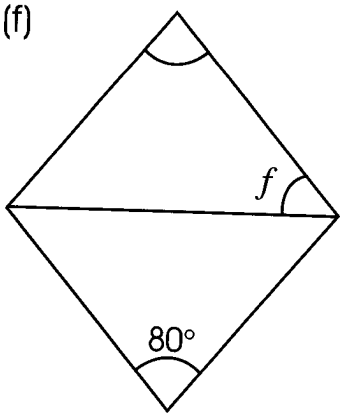
(d)



(e)

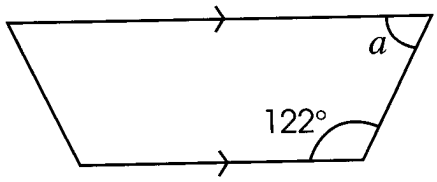


(f)

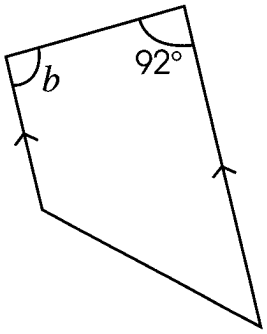


3. The following trapeziums are **not** drawn to scale.
Find the unknown angles.

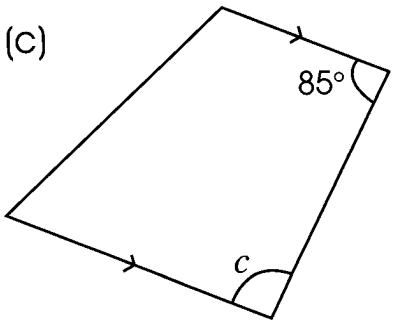
(a)



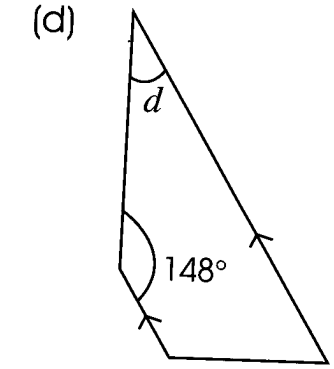
(b)



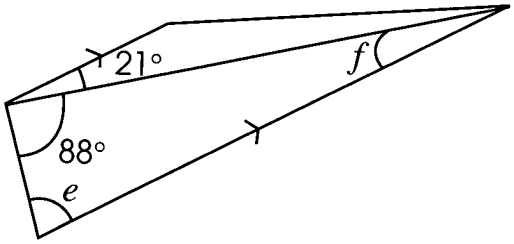
(c)



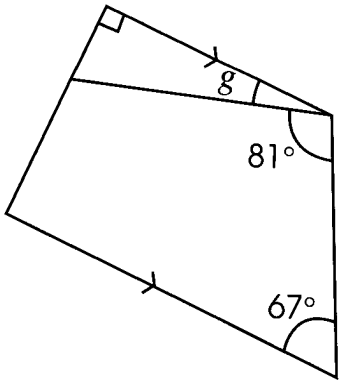
(d)

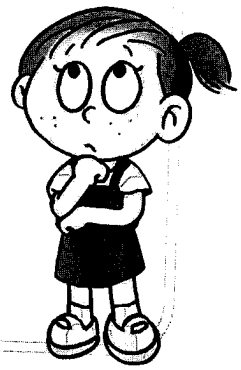


(e)



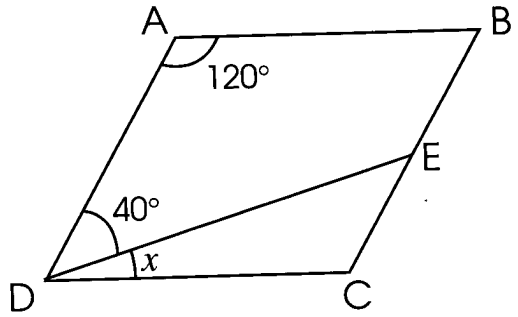
(f)



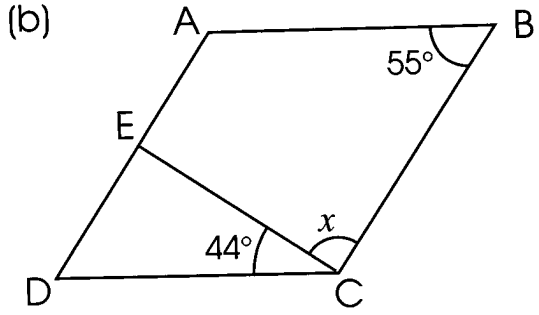


4. The following parallelograms are **not** drawn to scale.
Find $\angle x$.

(a)

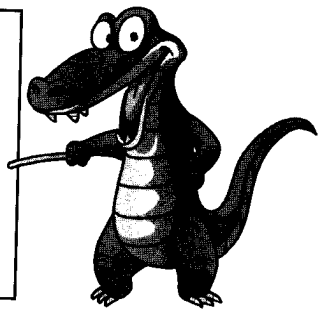


(b)



5. Fill in the name of the shape that fits the description best. Each shape can be used more than once.

Square	**Rhombus**
Rectangle	**Trapezium**
Parallelogram	**Triangle**



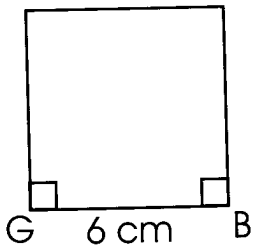
Description	Shape(s)
A four-sided figure whose opposite sides are parallel.	
A four-sided figure whose opposite sides are equal and each angle in the figure is 90°.	
A four-sided figure where only one pair of opposite sides are parallel.	
A four-sided figure whose opposite sides are parallel and all the sides are equal in length.	
A four-sided figure whose sides are equal and each angle is 90°.	

WORKSHEET 46

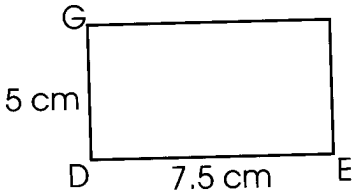
Date: _____

Construction of 4-sided Figures

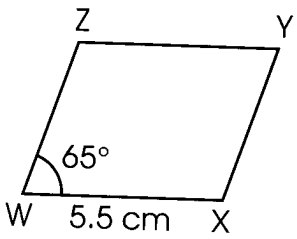
1. Draw a square ABCD in which AB = 6 cm.



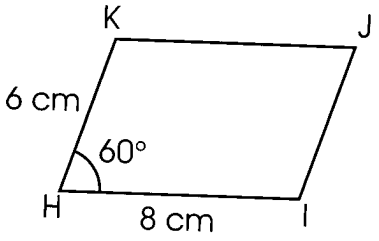
2. Draw a rectangle DEFG in which DE = 7.5 cm and DG = 5 cm.



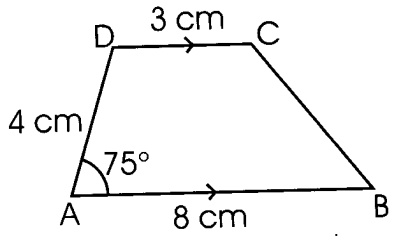
3. Draw a rhombus WXYZ in which WX = 5.5 cm and $\angle$ ZWX = 65°.



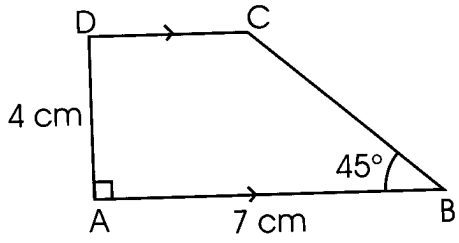
4. Draw a parallelogram HIJK in which HI = 8 cm, HK = 6 cm and $\angle$ KHI = 60°.



5. Draw a trapezium ABCD in which DC// AB, AB = 8 cm, ∠BAD = 75°, AD = 4 cm and DC = 3 cm.



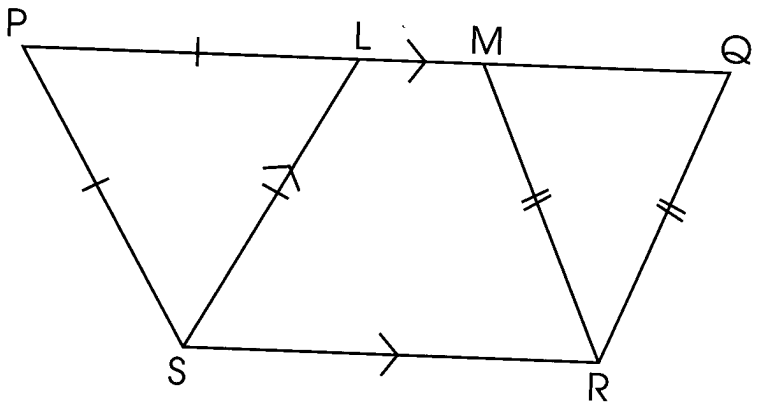
6. Draw a trapezium ABCD in which DC//AB, AB = 7 cm, ∠BAD = 90° AD = 4 cm and ∠ ABC = 45°.



Practice 13

Date:

1. Identify the type of figures:



PQRS →

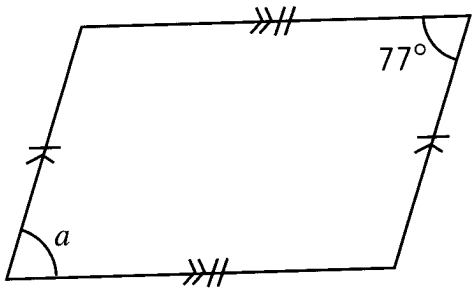
PSL →

QMR →

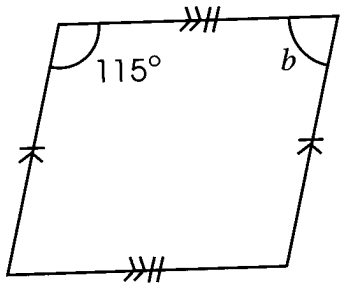
LMRS →

2. The following figures are **not** drawn to scale. Find the unknown angles.

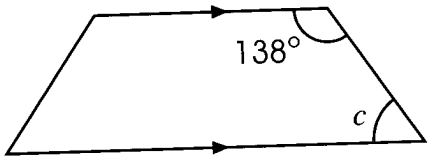
(a)

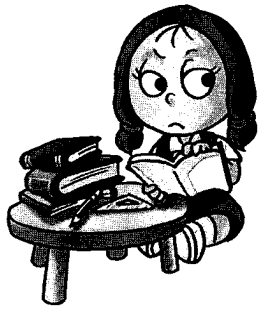


(b)

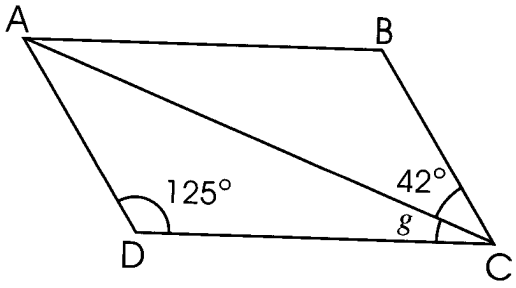


(c)

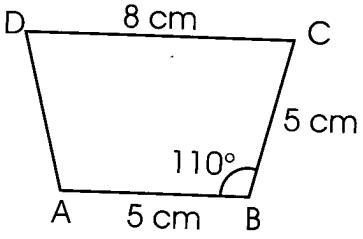




3. ABCD is a parallegram. Find $\angle g$ in the parallelogram below.



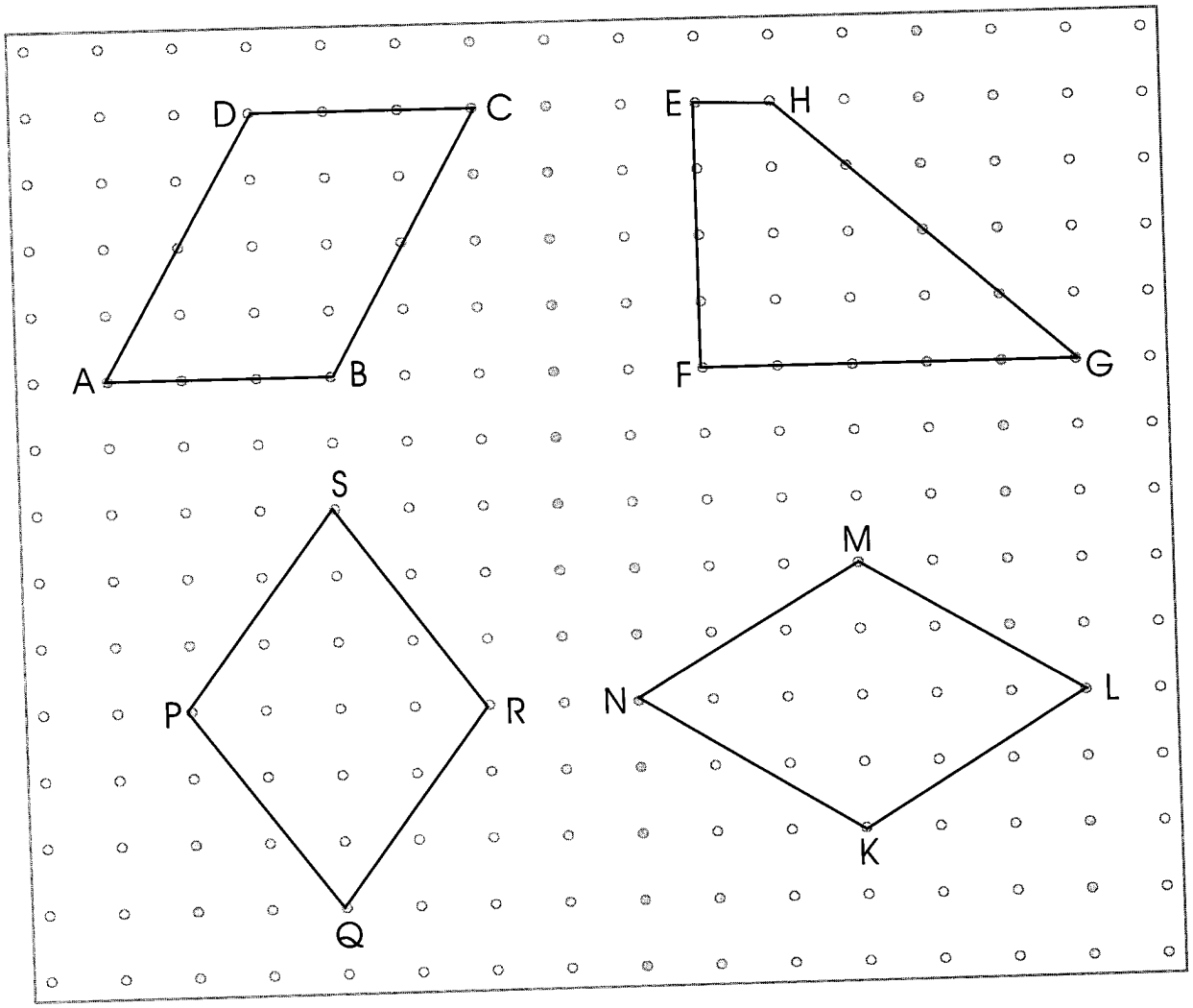
4. Draw a trapezium ABCD with AB//CD, AB = 5 cm, $\angle ABC = 110°$, BC = 5 cm and DC = 8 cm.



Revision 4A

Date: _____

1. Name each figure shown on the grid accurately.



ABCD is a _____

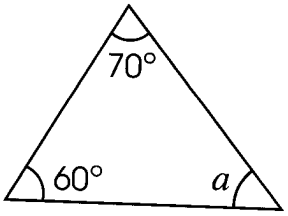
EFGH is a _____

PQRS is a _____

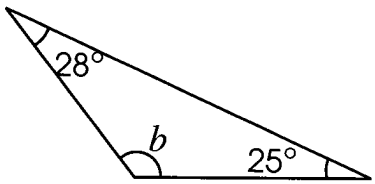
KLMN is a _____

2. The following figures are **not** drawn to scale. Find the unknown angles.

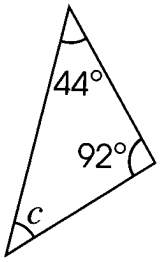
(a)



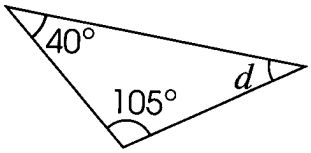
(b)



(c)

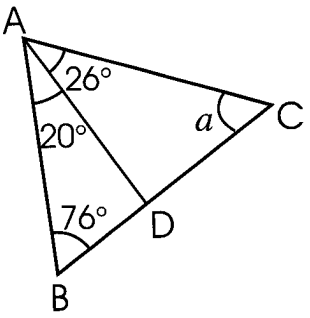


(d)

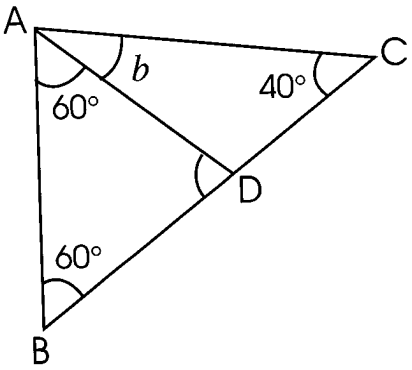


3. The following figures are **not** drawn to scale. Find the unknown angles.

(a)

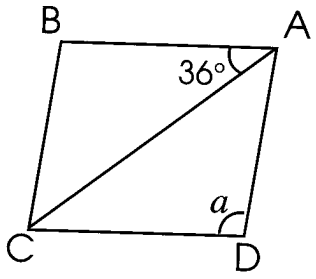


(b)

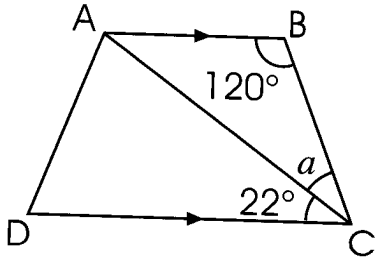


4. The following figures are **not** drawn to scale. Find the unknown angles.

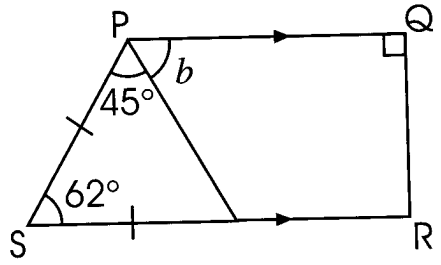
(a) ABCD is a rhombus.



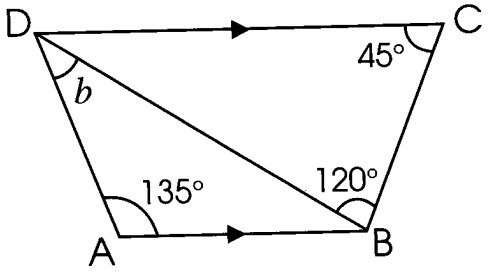
(b) ABCD is a trapezium.



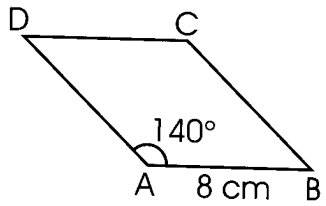
(c) PQRS is a trapezium.



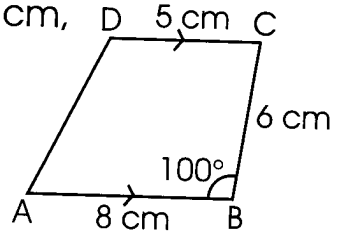
(d) ABCD is a trapezium.

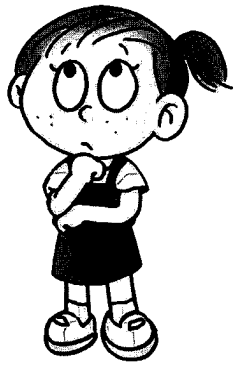


5. Draw a rhombus ABCD in which AB = 8 cm and $\angle DAB = 140°$.



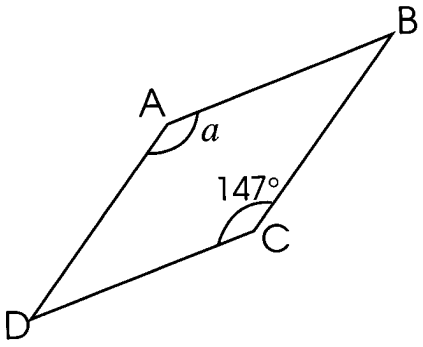
6. Draw a trapezium ABCD in which AB//DC, AB = 8 cm, BC = 6 cm, CD = 5 cm and $\angle ABC = 100°$.



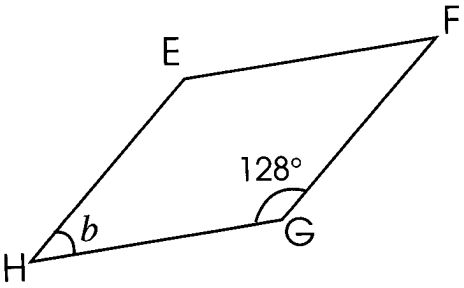


7. The following figures are **not** drawn to scale. Find the unknown angles.

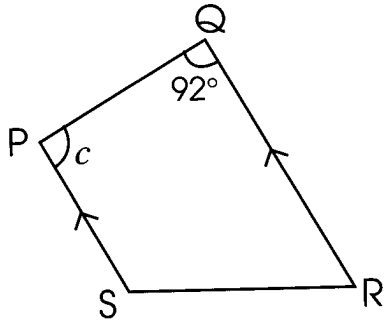
(a) ABCD is a parallelogram.



(b) EFGH is a rhombus.

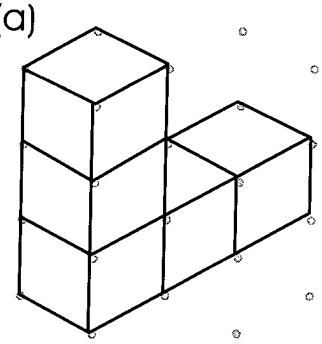


(c) PQRS is a trapezium.

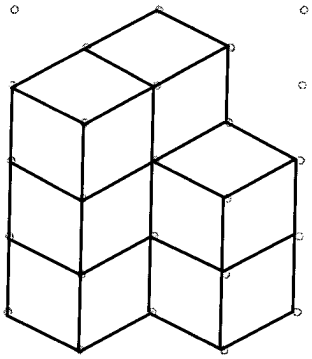


8. The following solids are made up of 1-cm cubes. Find their volumes and write the answers in the boxes provided.

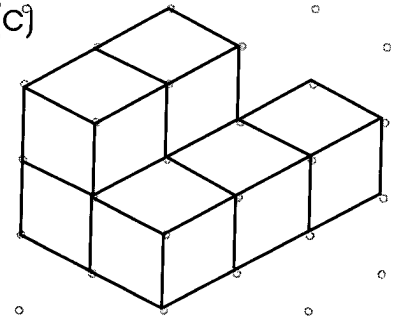
(a)



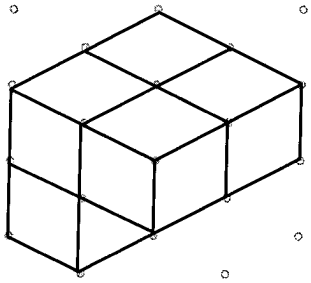
(b)



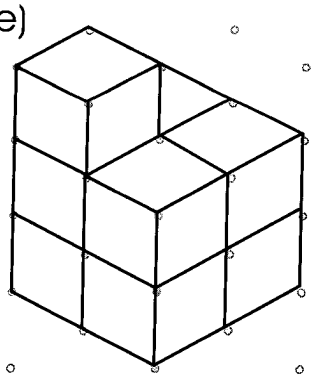
(c)



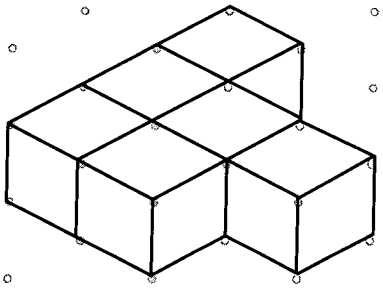
(d)



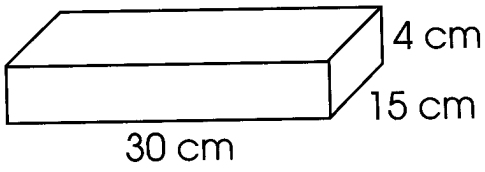
(e)



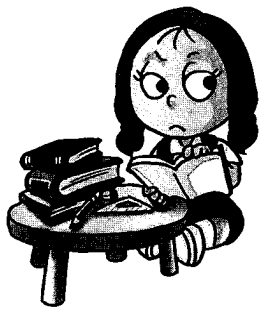
(f)



9. How many 1-cm cubes are needed to build a cuboid measuring 30 cm by 15 cm by 4 cm?



10. A rectangular carton measures 8 cm by 8 cm by 20 cm. It contains 1 ℓ of milk. Find the empty space in the carton.

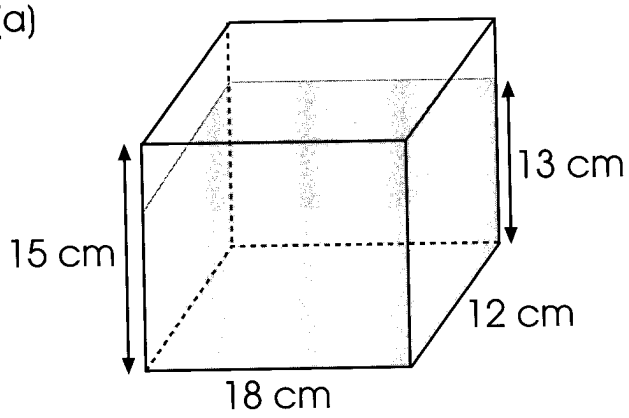


11. A tank measures 60 cm by 50 cm by 30 cm. Find its capacity in litres.

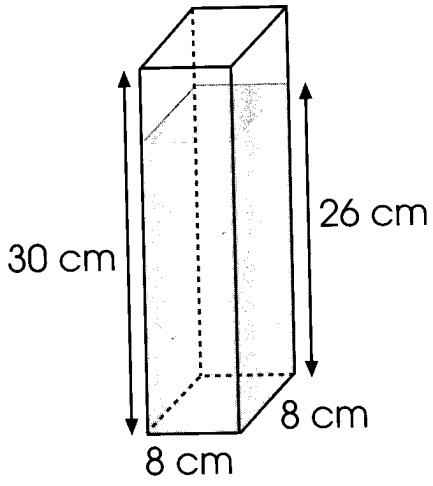
12. The length of a side of a cube is 16 cm. Find its volume.

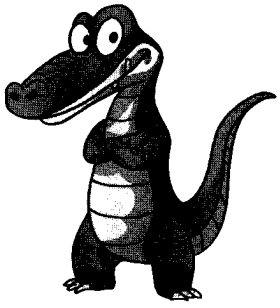
13. The following tanks are not completely filled with water. How many more millilitres of water are required to fill each of the tanks completely?

(a)



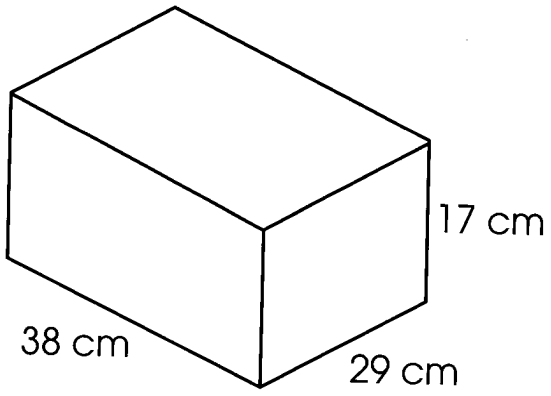
(b)



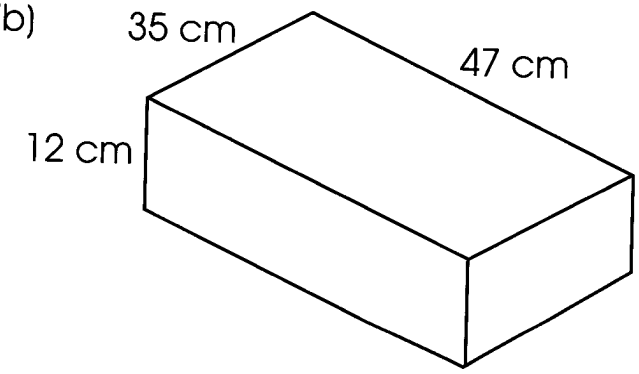


14. Find the volume of each cuboid shown below:

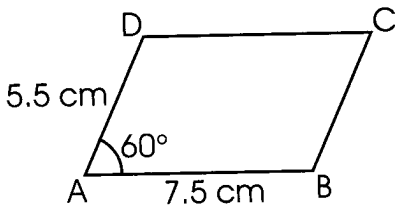
(a)



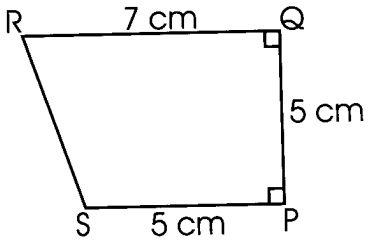
(b)



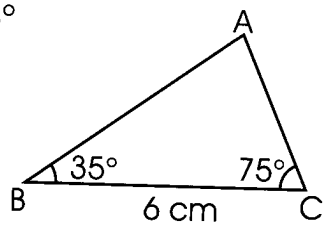
15. Draw a parallelogram ABCD in which AB = 7.5 cm, AD = 5.5 cm and $\angle BAD = 60°$.



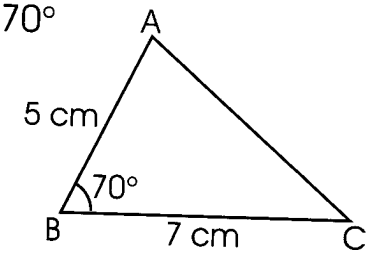
16. Draw a trapezium PQRS in which PQ = PS = 5 cm, QR = 7 cm and $\angle SPQ = \angle PQR = 90°$.



17. Draw a triangle ABC with BC = 6 cm, $\angle ABC = 35°$ and $\angle ACB = 75°$.



18. Draw a triangle ABC with AB = 5 cm, $\angle ABC = 70°$ and BC = 7 cm.

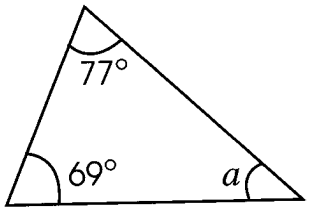


Revision 4B

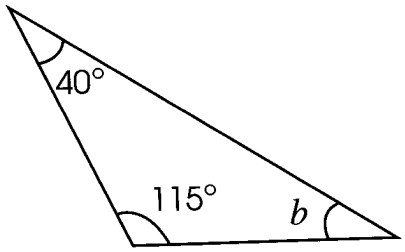
Date:

1. The following figures are **not** drawn to scale. Find the unknown angles.

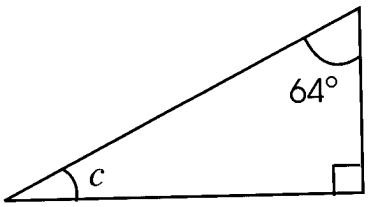
(a)



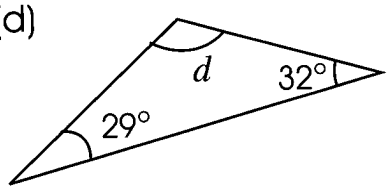
(b)



(c)

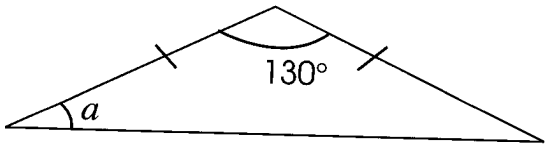


(d)

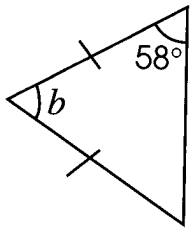


2. The following figures are **not** drawn to scale. Find the unknown angles.

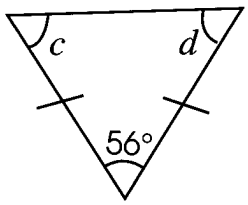
(a)

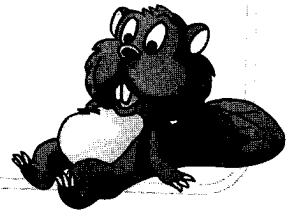


(b)

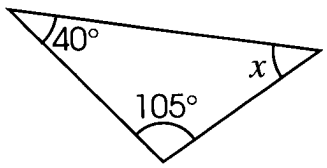


(c)

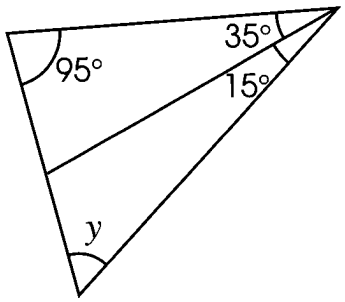




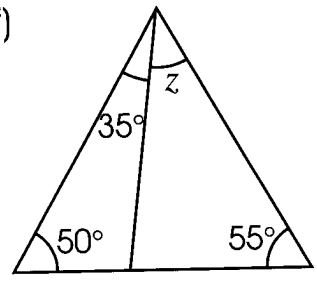
(d)



(e)

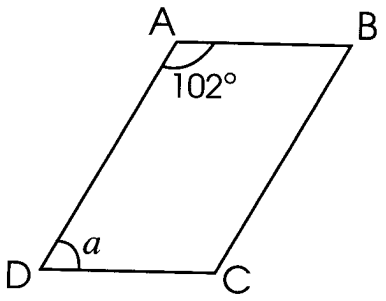


(f)

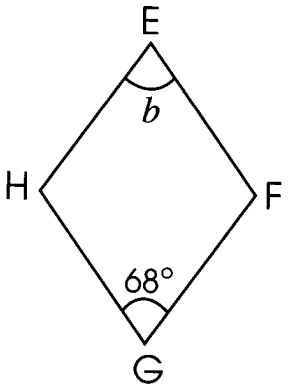


3. The following figures are **not** drawn to scale. Find the unknown angles.

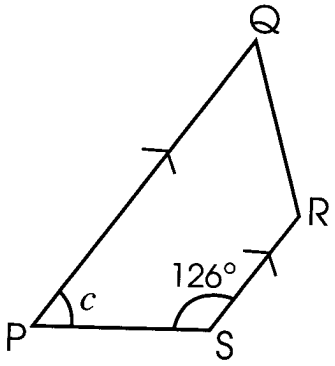
(a) ABCD is a parallelogram.

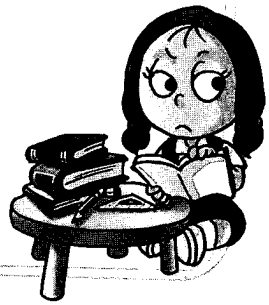


(b) EFGH is a rhombus.

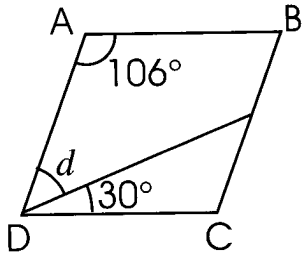


(c) PQRS is a trapezium.

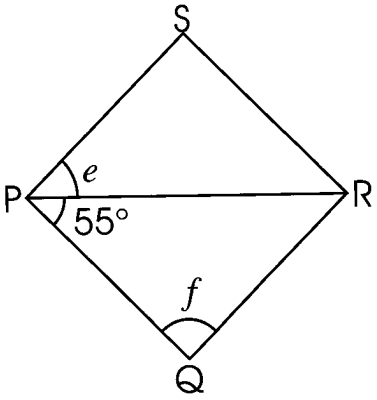




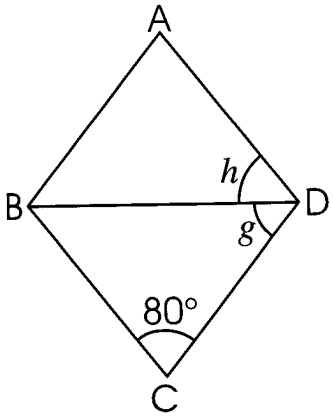
(d) ABCD is a parallelogram .



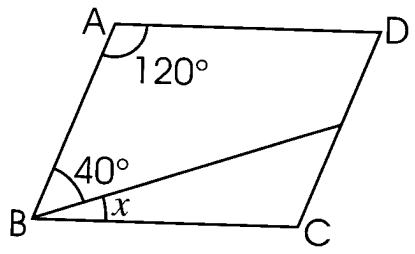
(e) PQRS is a rhombus.



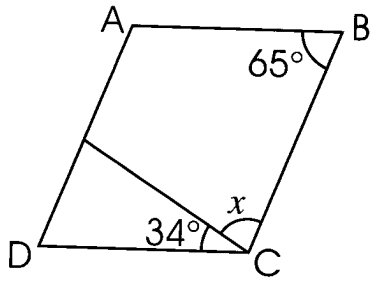
(f) ABCD is a rhombus.



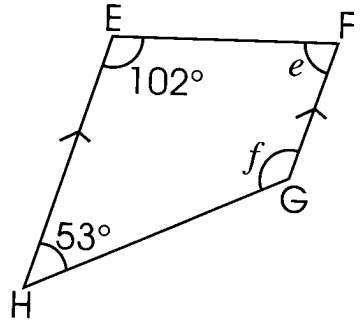
(g) ABCD is a parallelogram .



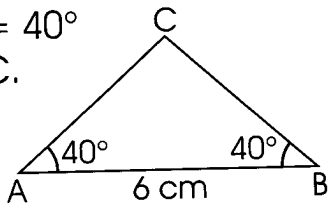
(h) ABCD is a parallelogram .



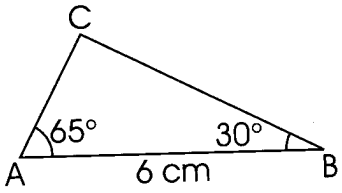
(i) EFGH is a trapezium.

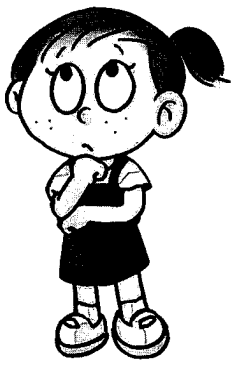


4. Draw a triangle ABC in which AB = 6 cm, $\angle CAB = 40°$ and $\angle CBA = 40°$. Measure the length AC and BC. What is the name of this triangle?



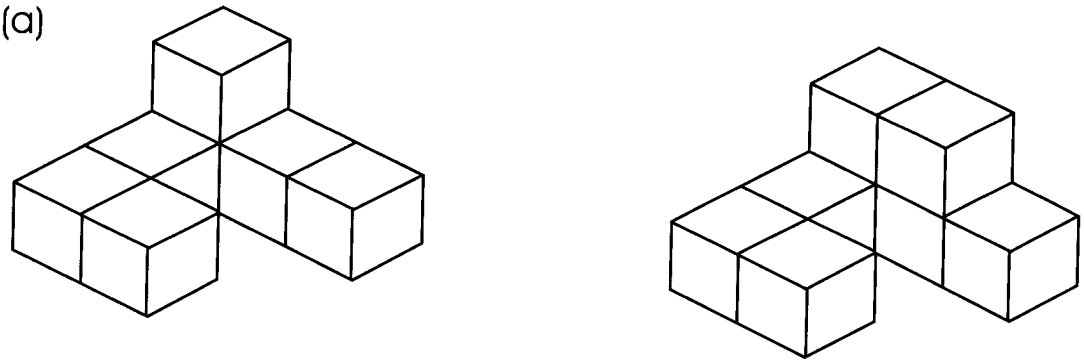
5. Draw a triangle ABC with $\angle ABC = 30°$, $\angle CAB = 65°$ and AB = 6 cm.



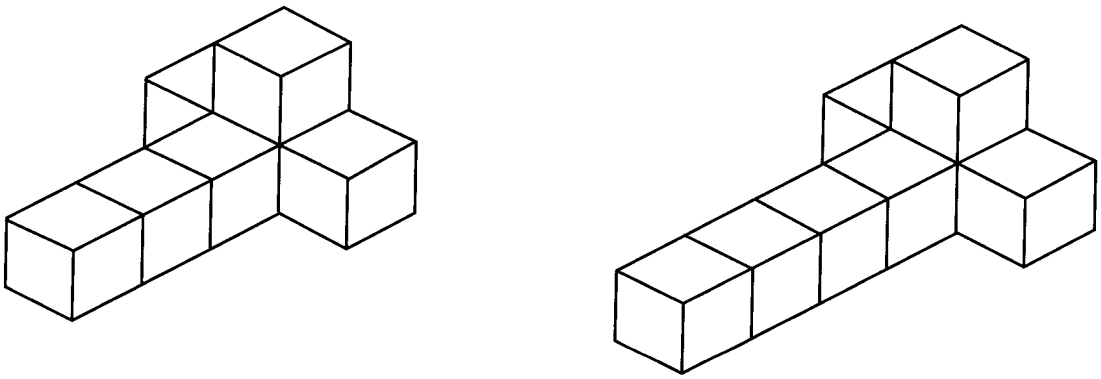


6. Circle the solid with the greater volume in each pair.

(a)



(b)



7. Fill in the blanks.

(a) 7100 ml = ☐ ℓ

(b) 3.05 ℓ = ☐ cm^3

(c) 150 cm^3 = ☐ ℓ

(d) 215 ml = ☐ cm^3

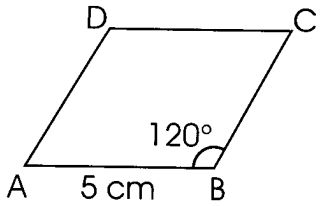
(e) 0.35 ℓ = ☐ ml

(f) 50 cm^3 = ☐ ml

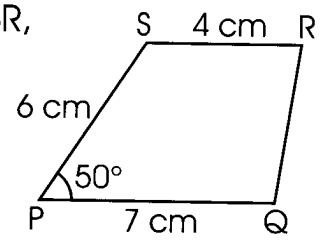
(g) 65 ℓ = ☐ cm^3

(h) 125 cm^3 = ☐ ℓ

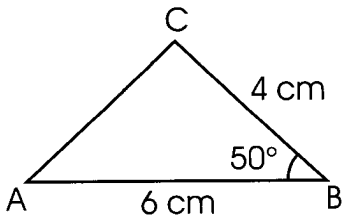
8. Draw a rhombus ABCD in which AB = 5 cm and $\angle ABC = 120°$.



9. Draw a trapezium PQRS in which PQ is parallel to SR, PQ = 7 cm, SR = 4 cm, SP = 6 cm and $\angle SPQ = 50°$.



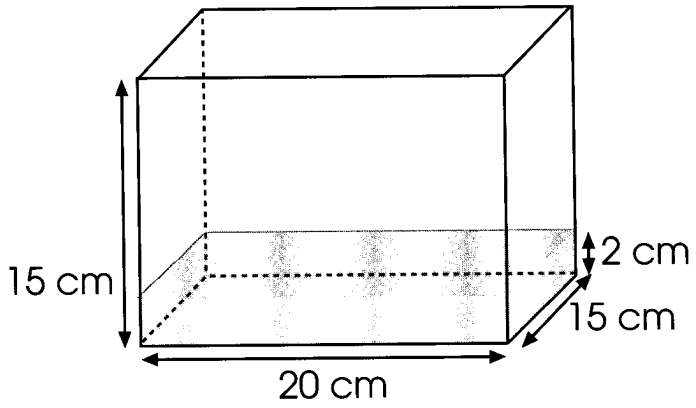
10. Draw a triangle ABC with AB = 6 cm, $\angle ABC = 50°$ and BC = 4 cm.



11. A tank measures 20 cm by 15 cm by 15 cm. The water level in the tank is 2 cm.

(a) Find the volume of water in the tank shown.

(b) Find the volume of water required to fill the tank completely.



12. A petrol can is 20 cm long, 12 cm wide and 25 cm high. If petrol costs $1.40 per litre, how much will it cost to fill the can completely?

13. Boxes of video recorders are stacked and kept in a factory. Each box is 50 cm by 30 cm by 15 cm. Find the volume of 3 such boxes.

15. A rectangular tank 25 cm long, 15 cm wide and 20 cm high is filled with water to a depth of 8 cm.

(a) Find the volume of the water required to fill the tank completely in cubic centimetres.

(b) Express this volume of water in litres and millilitres.