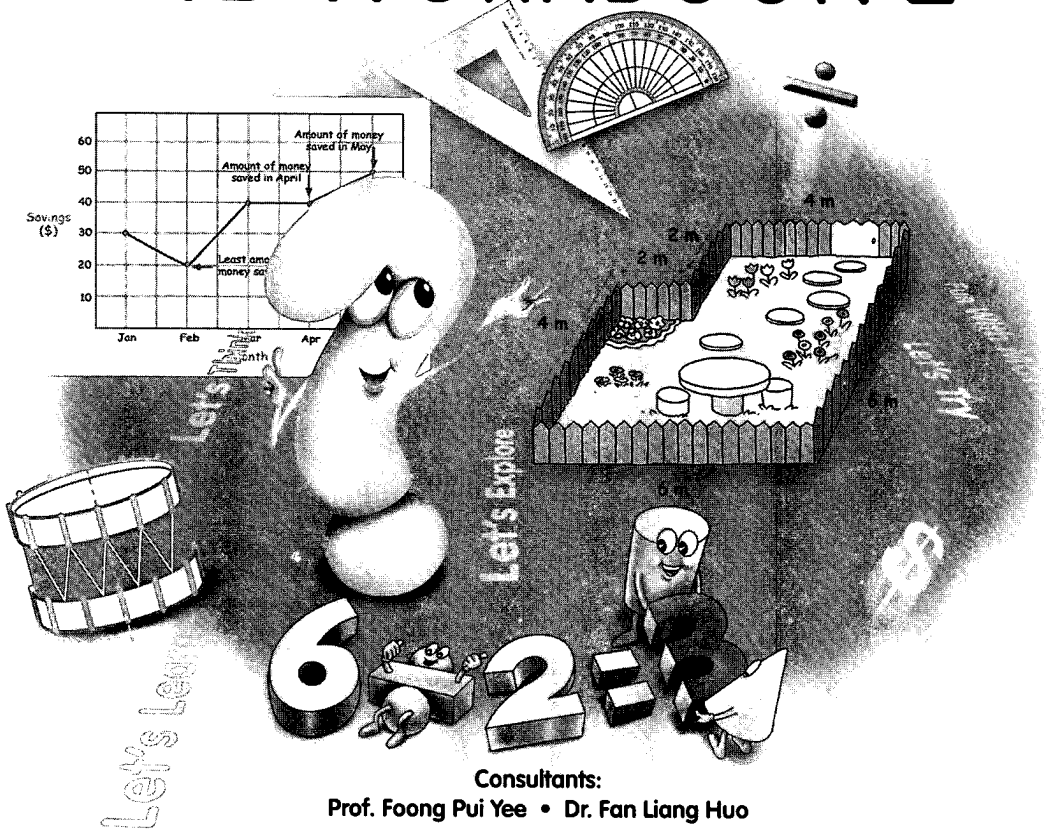
New Syllabus

Primary Mathematics

4B WORKBOOK 2



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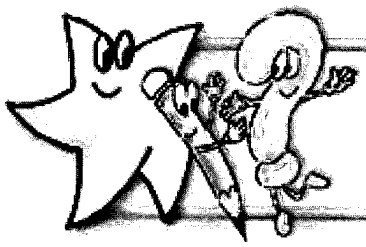

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14. Tessellations

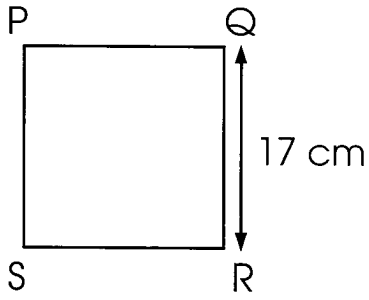
11 Squares and Rectangles

WORKSHEET 40

Date: ☐

Squares

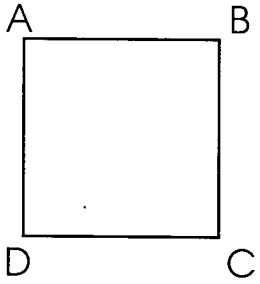
1. PQRS is a square. What is the length of PQ and PS?



PQ = ☐ cm

PS = ☐ cm

2. ABCD is a square.



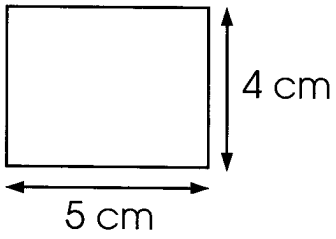
∠ABC = ☐°

∠ADC = ☐°

∠BCD = ☐°

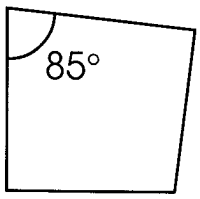
3. Are the following figures squares?

(a)



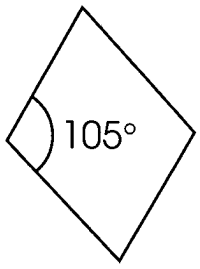
YES / NO

(b)



YES / NO

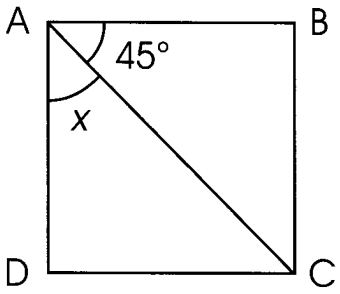
(c)



YES / NO

4. Find the unknown angle in each of the following squares.

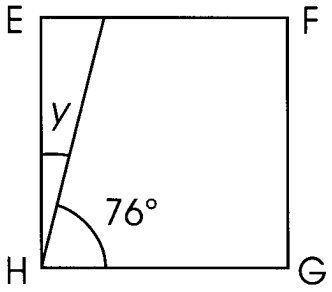
(a)



$\angle x$ = ☐° − ☐°

= ☐°

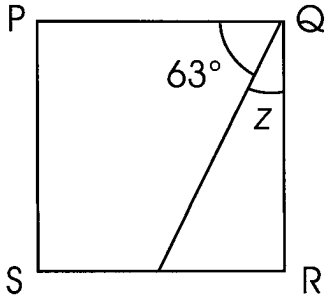
(b)



$\angle y$ = ☐° − ☐°

= ☐°

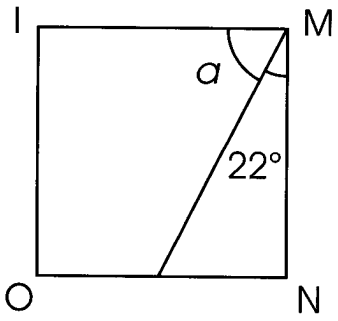
(c)



$\angle z$ = ☐° − ☐°

= ☐°

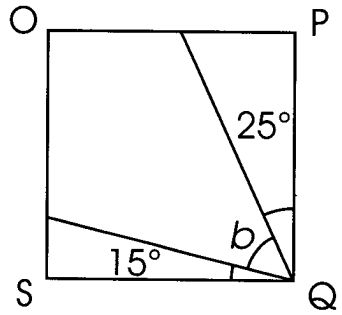
(d)



$\angle a$ = ☐° − ☐°

= ☐°

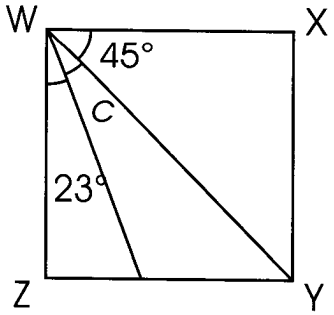
(e)



$\angle b$ = ☐° − ☐° − ☐°

= ☐°

(f)



$\angle c$ = ☐° − ☐° − ☐°

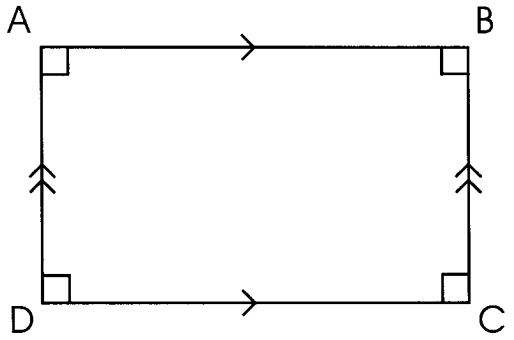
= ☐°

WORKSHEET 41

Date: ☐

Rectangles

1. Fill in the boxes.



AB // ☐

BC // ☐

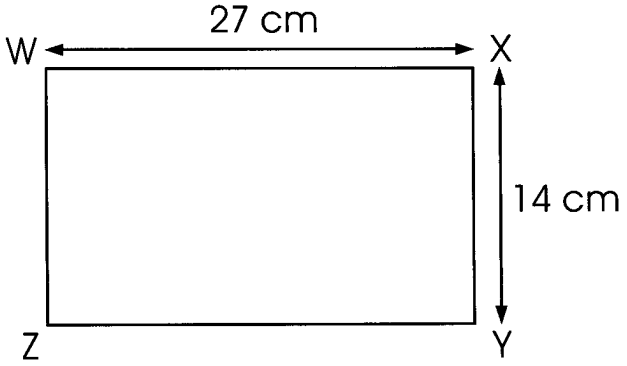
AB ⊥ ☐ and ☐

CD ⊥ ☐ and ☐

There are ☐ right angles in ABCD.

ABCD is a ☐.

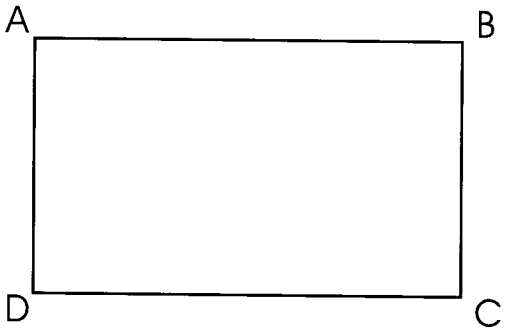
2. WXYZ is a rectangle. What is the length of WZ and YZ?



WZ = ☐ cm

YZ = ☐ cm

3. ABCD is a rectangle.



$\angle DAB =$ ☐

$\angle DAB =$ ☐
$\angle ABC =$ ☐

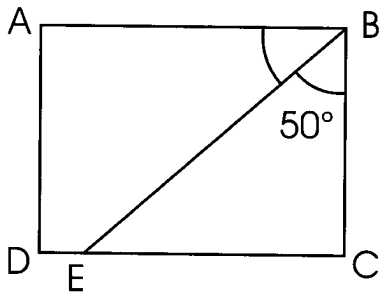
$\angle ABC =$ ☐
$\angle BCD =$ ☐

$\angle BCD =$ ☐
$\angle CDA =$ ☐

$\angle CDA =$ ☐

4. Find the unknown marked angle in each of the following rectangles.

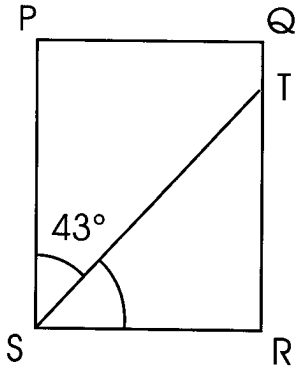
(a)



$\angle ABE =$ ☐° − ☐°

$=$ ☐°

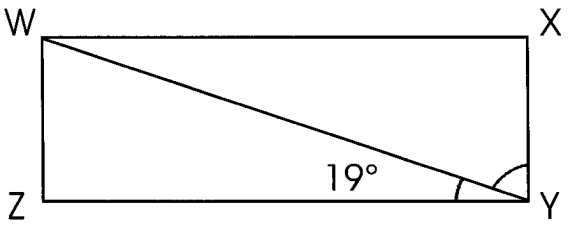
(b)



$\angle TSR =$ ☐° − ☐°

$=$ ☐°

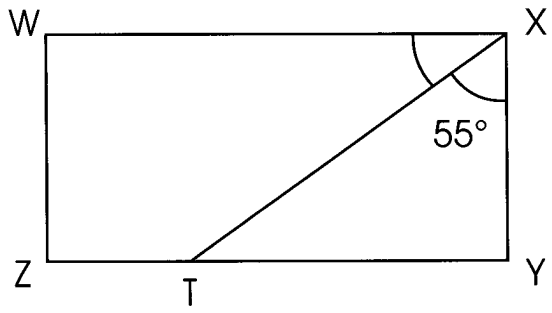
(c)



$\angle WYX =$ ☐° − ☐°

$=$ ☐°

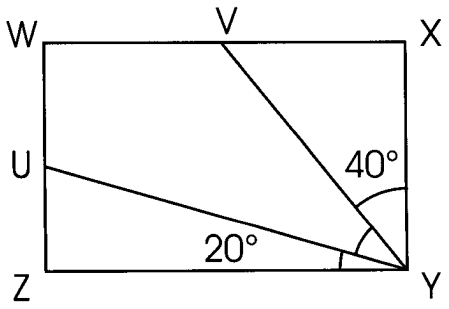
(d)



$\angle WXT =$ ☐° − ☐°

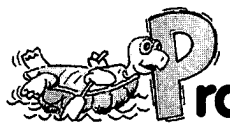
$=$ ☐°

(e)



$\angle VYU =$ ☐° − ☐° − ☐°

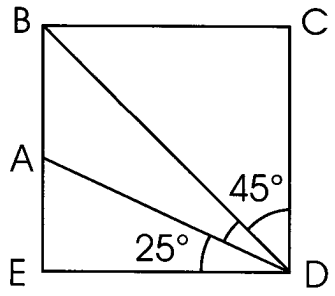
$=$ ☐°



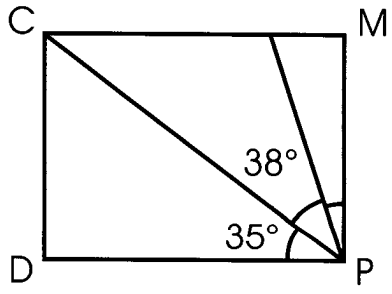
Practice 11

Date:

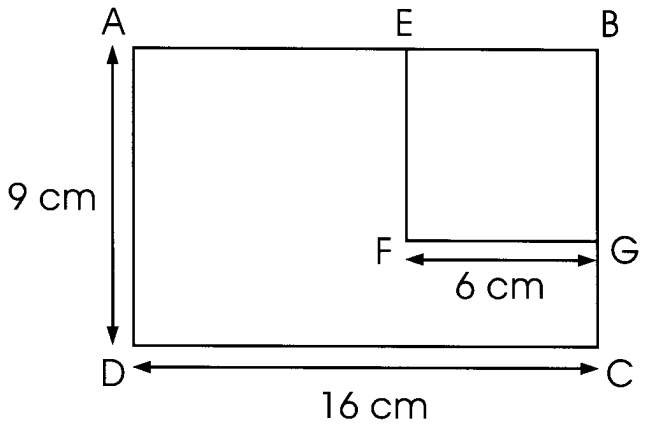
1. BCDE is a square. If ∠ADE = 25° and ∠BDC = 45°, find ∠ADB.



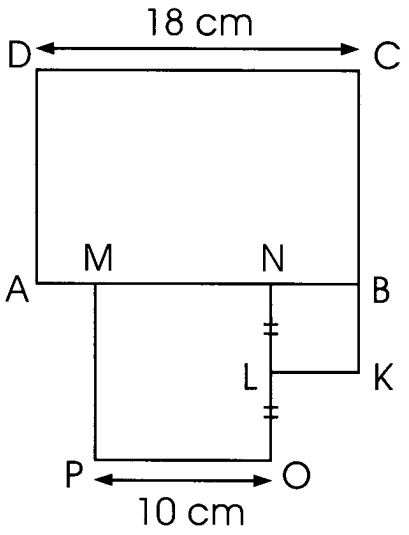
2. MCDP is a rectangle. ∠DPC = 35° and ∠CPF = 38°. Find ∠MPF.



3. ABCD is a rectangle with AD = 9 cm and CD = 16 cm.
If BEFG is a square of sides 6 cm, find the lengths of GC and AE.



4. In the figure shown below, ABCD is a rectangle. MNOP and BKLN are squares. If OP = 10 cm, DC = 18 cm and NL = LO, find the length of AM.



12 Area and Perimeter

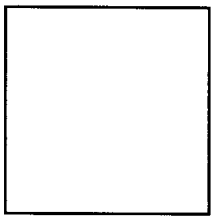
WORKSHEET 42

Date: ____

Area and Perimeter of a Square

1. Find the length and perimeter of each of the following squares.

(a)



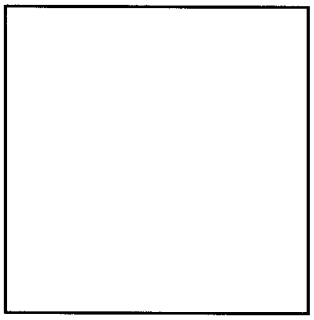
Area = 81 cm^2

Length = ____

Perimeter = ____ × ____

= ____

(b)



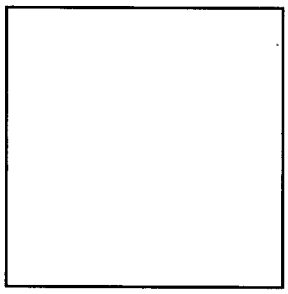
Area = 64 m^2

Length = ____

Perimeter = ____ × ____

= ____

(c)



Area = 100 cm^2

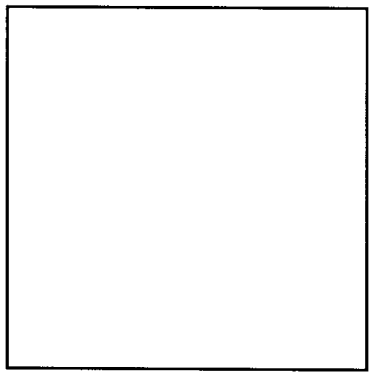
Length = ☐

Perimeter = ☐ × ☐

= ☐

2. Find the area of each of the following squares.

(a)



Perimeter = 36 m

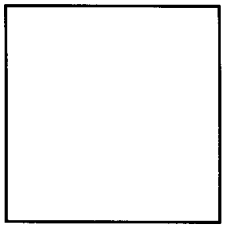
Length = ☐ ÷ ☐

= ☐

Area = ☐ × ☐

= ☐

(b)



Perimeter = 80 cm

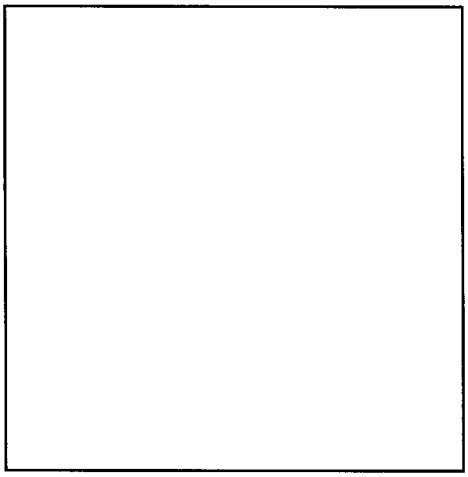
Length = ☐ ÷ ☐

= ☐

Area = ☐ × ☐

= ☐

(c)



Perimeter = 120 m

Length = ☐ ÷ ☐

= ☐

Area = ☐ × ☐

= ☐

3. A piece of wire is used to form a square. If the length of the wire is 200 cm, find the

(a) length of one side of the square,

(b) area of the square.

4. A square piece of paper has an area of 36 cm^2.
Find the

(a) length of one side of the piece of paper,

(b) perimeter of the paper.

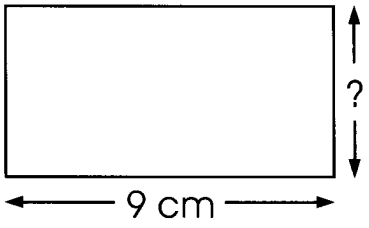
WORKSheet 43

Date: ☐

Area and Perimeter of a Rectangle

1. Find the unknown side and perimeter of each of the following rectangles.

(a)



Area = 63 cm^2

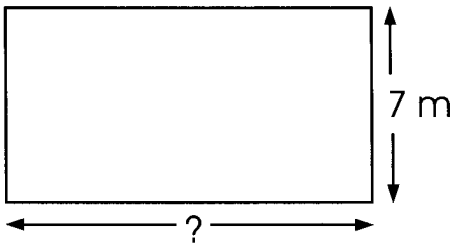
Breadth = ☐ ÷ ☐

= ☐ cm

Perimeter = ☐ + ☐ + ☐ + ☐

= ☐ cm

(b)



Area = 168 m^2

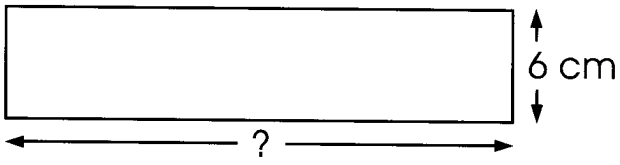
Length = ☐ ÷ ☐

= ☐ m

Perimeter = ☐ + ☐ + ☐ + ☐

= ☐ m

(c)



Area = 216 cm^2

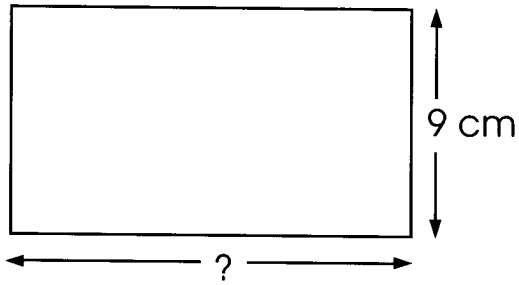
Length = ☐ ÷ ☐

= ☐ cm

Perimeter = ☐ + ☐ + ☐ + ☐

= ☐ cm

(d)



Area = 225 cm^2

Length = ☐ ÷ ☐

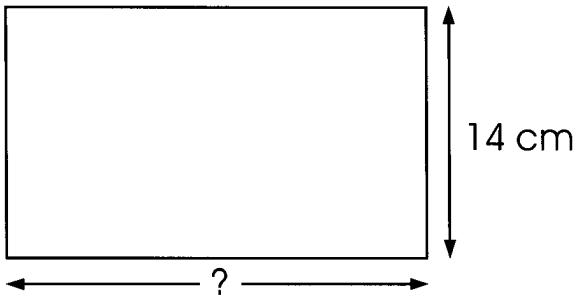
= ☐ cm

Perimeter = ☐ + ☐ + ☐ + ☐

= ☐ cm

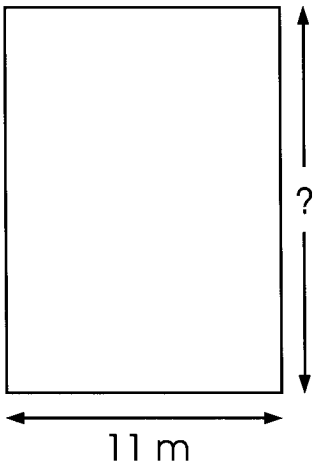
2. Find the unknown side and area of each of the following rectangles.

(a)



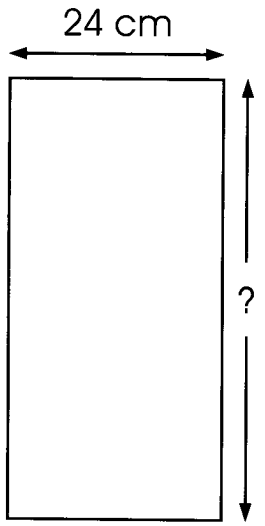
Perimeter = 64 cm

(b)



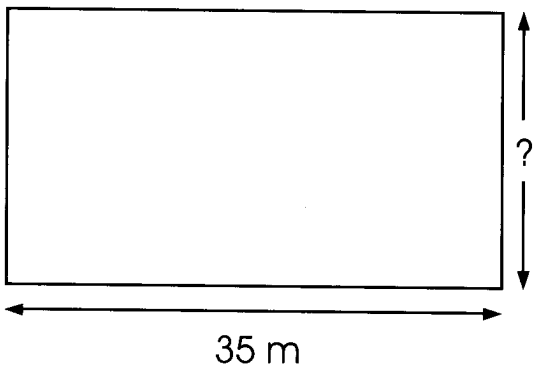
Perimeter = 70 m

(c)



Perimeter = 102 cm

(d)



Perimeter = 134 m

3. Mr Hassan wants to enclose a rectangular plot of land with a fence. The length of the fence he needs is 88 m. If the breadth of the land is 16 m, find its

(a) length,

(b) area.

4. The area of a rectangular piece of ribbon is 312 cm^2. If the breadth of the ribbon is 8 cm, find its

(a) length,

(b) perimeter.

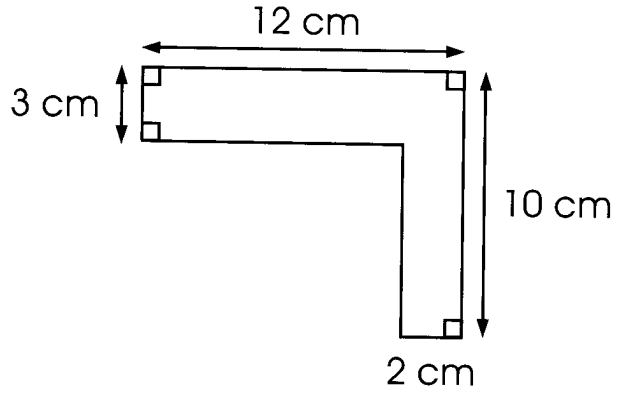
WORKSHEET 44

Date:

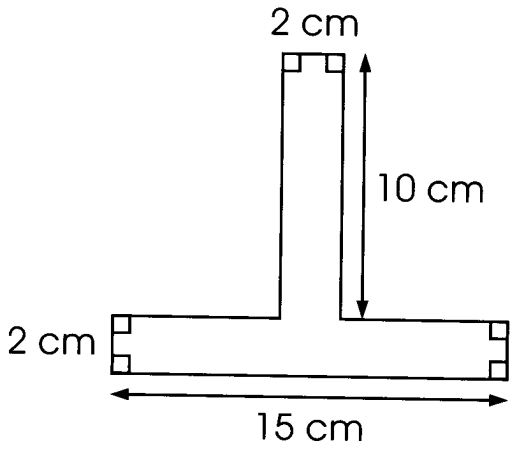
Area of Composite Figures

1. Find the area of each of the following figures. Show your workings clearly.

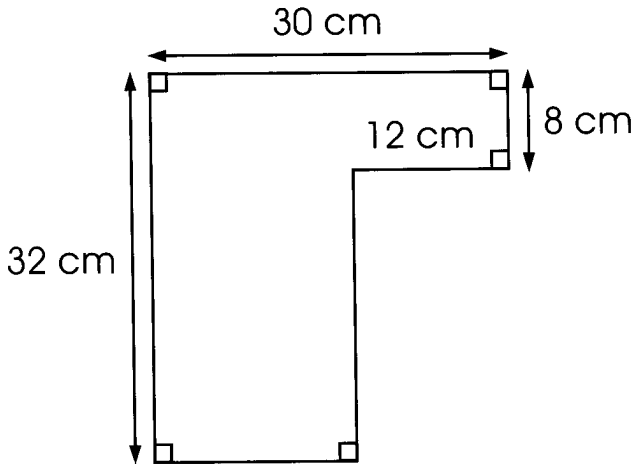
(a)



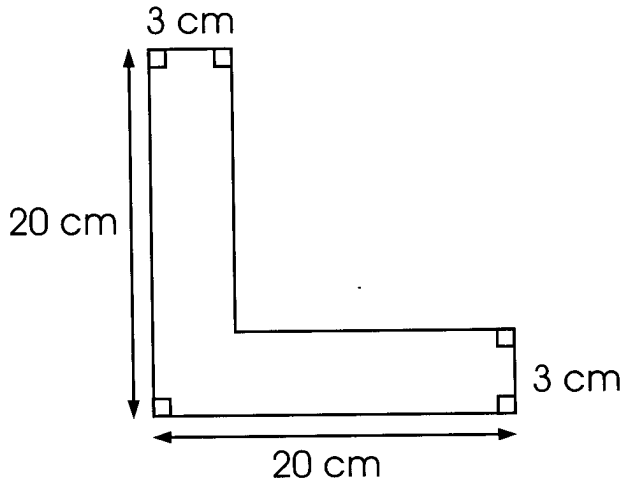
(b)



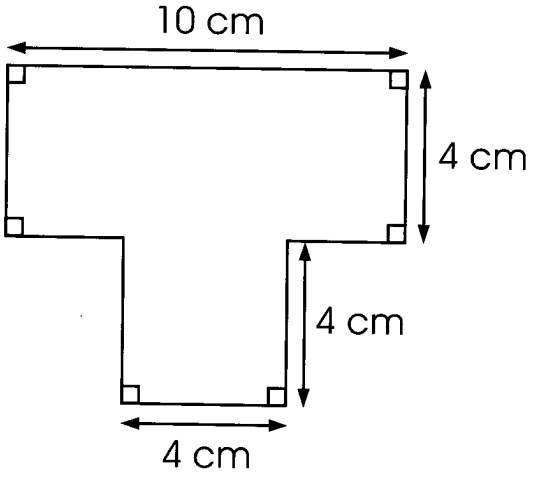
(c)



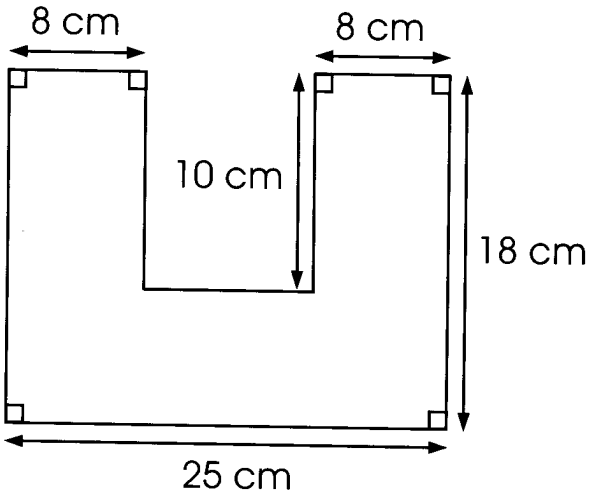
(d)



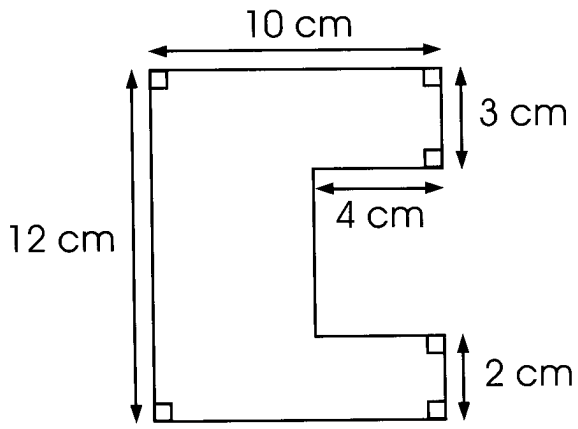
(e)



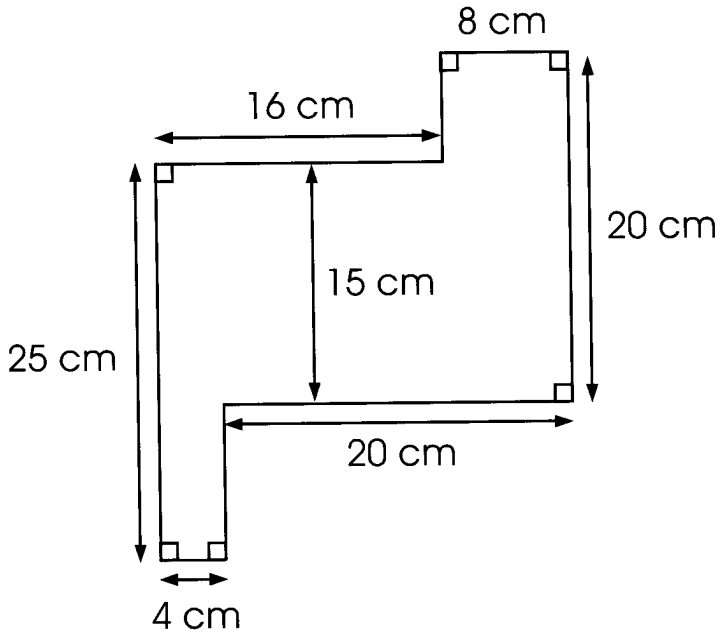
(f)



(g)



(h)

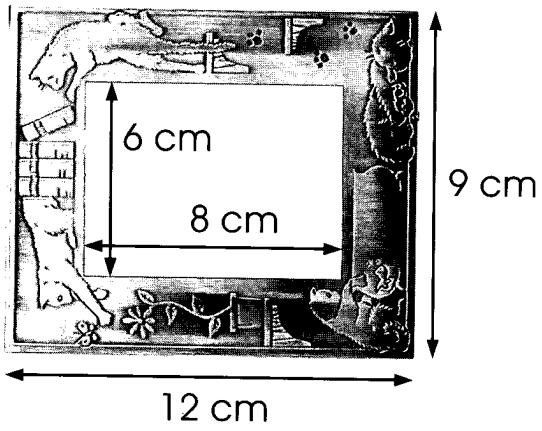


WORKSheet 45

Date:

Word Problems

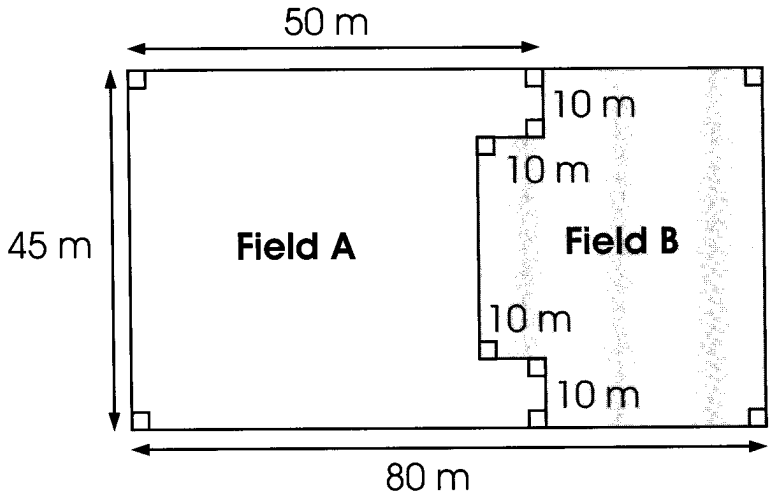
1. A photograph measuring 8 cm by 6 cm is placed in a frame measuring 12 cm by 9 cm. What is the area of the frame that is not covered by the photograph?



2. Field A and Field B are shown below.

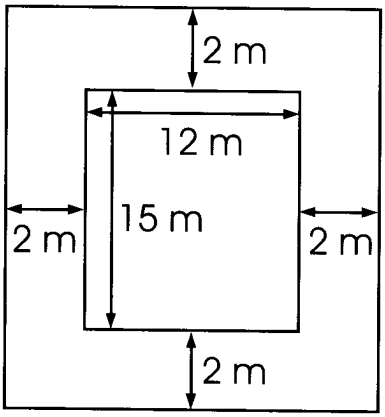
(a) Find the area of Field A.

(b) Find the area of Field B.



3. The length of a rectangular table-top is twice its breadth. If its breadth is 80 cm, find the area of the table-top.

4. A rectangular swimming pool, 15 m by 12 m, has a path of width 2 m all round it. Find the area of the path.

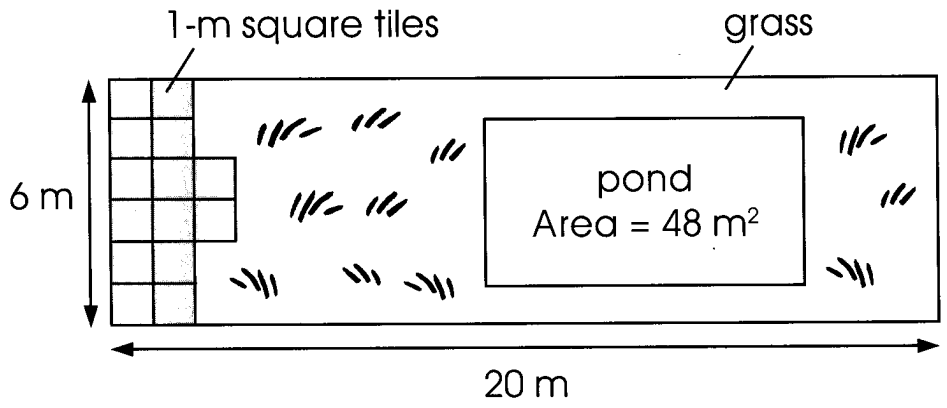


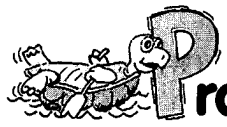
5. John's garden is in the shape of a rectangle as shown below. The shaded part is tiled. In the centre of the garden, there is a pond. Apart from the pond and the tiles, the garden is sown with grass seeds.

(a) What is the area of the whole garden?

(b) What is the area that is tiled?

(c) What is the area that is sown with grass seeds?

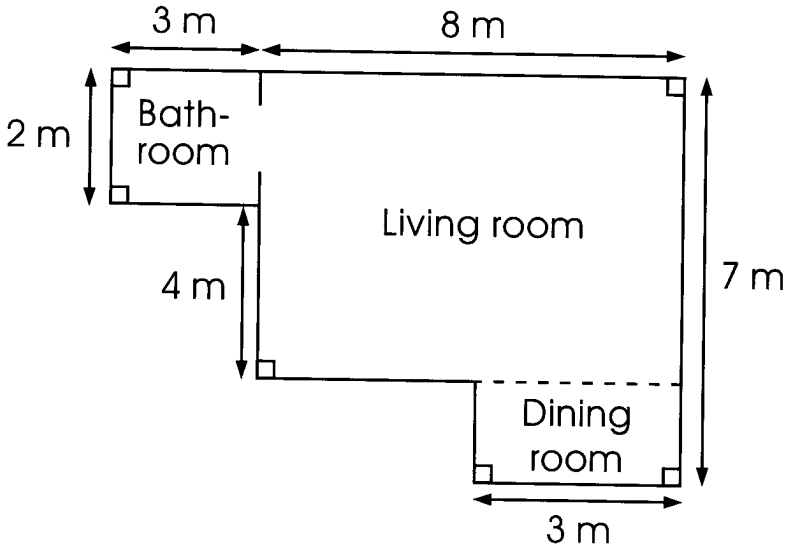




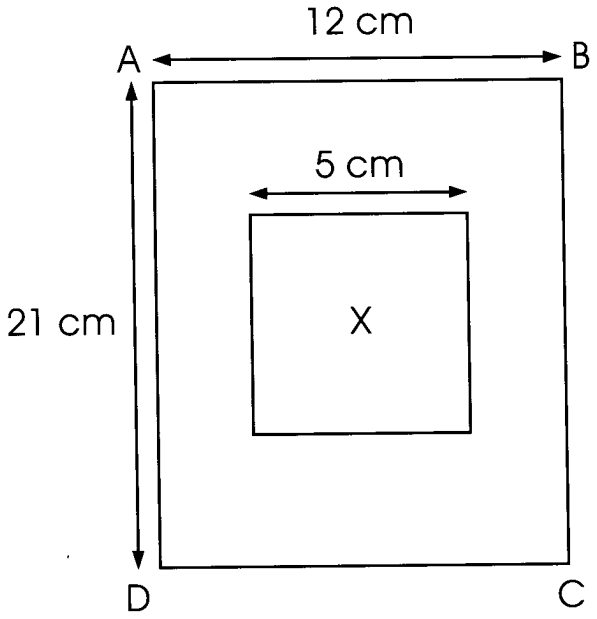
Practice 12

Date:

1. The figure below shows the bathroom, living room and dining room of a house. Find the total area of the figure.

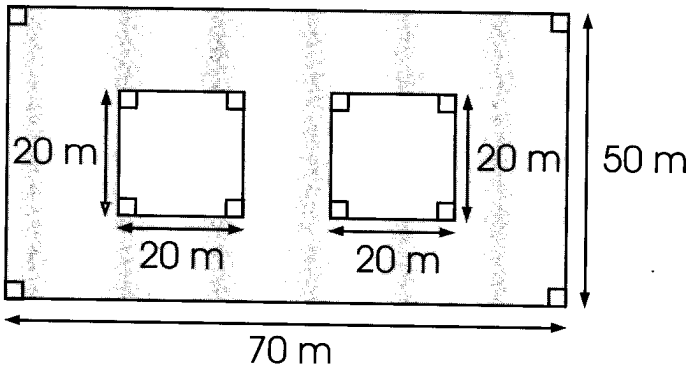


2. ABCD is a rectangle. A square X of sides 5 cm has been cut off. Find the remaining area of the rectangle.

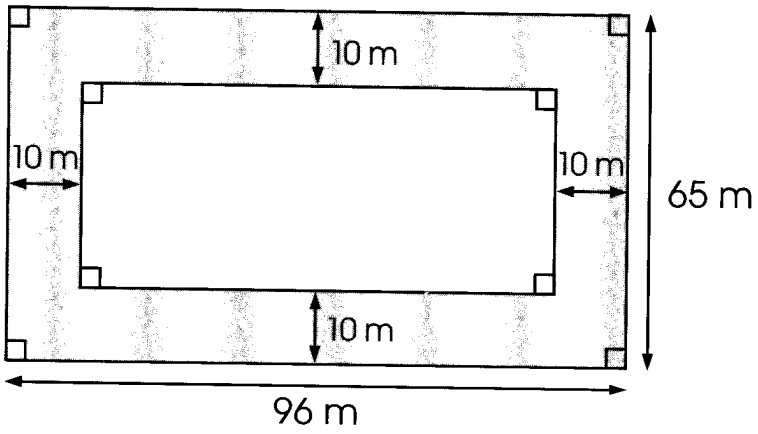


3. Find the area of the shaded part.

(a)



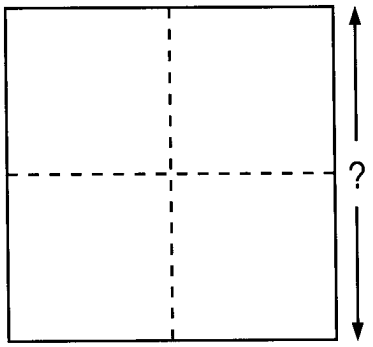
(b)



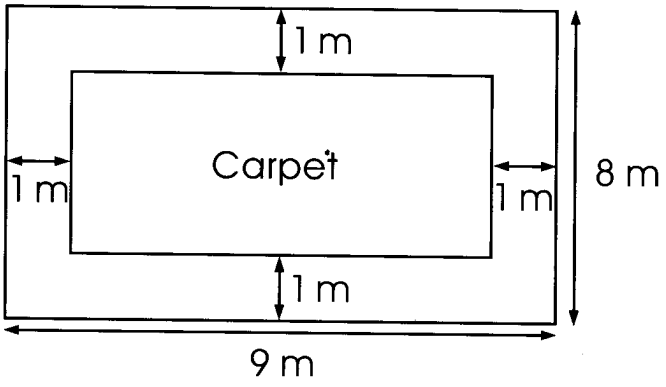
4. The big square below is made up of 4 equal smaller squares. The area of each small square is 25 cm^2.

(a) Find the length of a side of the big square.

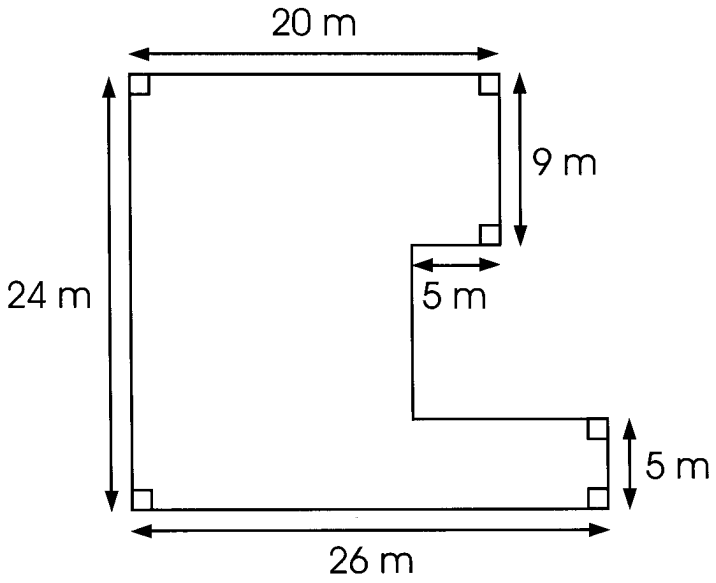
(b) What is the perimeter of the big square?



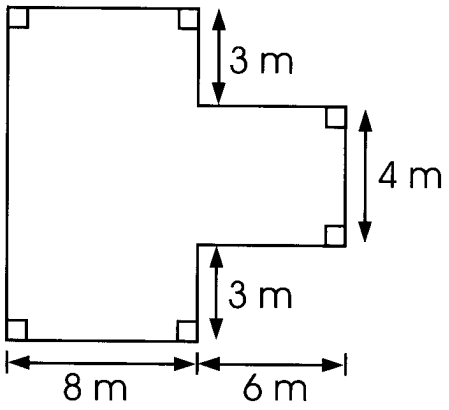
5. A rectangular carpet is placed on the floor of a rectangular room which measures 9 m by 8 m. It leaves a 1-m margin around it. Find the area of the carpet.



6. Mr Wang's garden is as shown below. What is the cost of putting up fence around the garden if 1 m of fencing costs $9?



7. The shape of an office is as shown below. It costs \$6 to carpet 1 m^2 of the floor. Find the cost of carpeting the floor.



13 Time

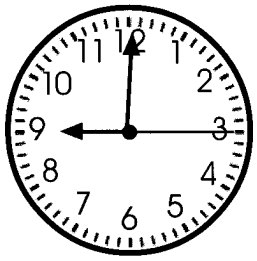
WORKSHEET 46

Date: ____

Measuring Time in Seconds

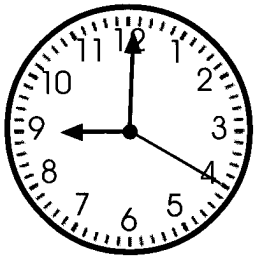
1. A 100-m race started at 9 a.m. sharp. The diagrams below show the number of seconds that 4 runners took for the race. Write their time in seconds.

(a)



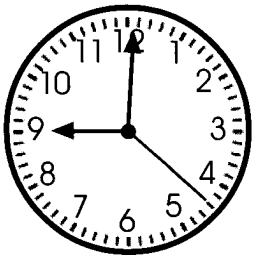
John: ____ s

(b)



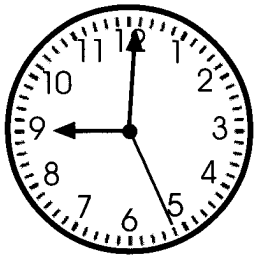
Thomas: ____ s

(c)



Andy: ____ s

(d)

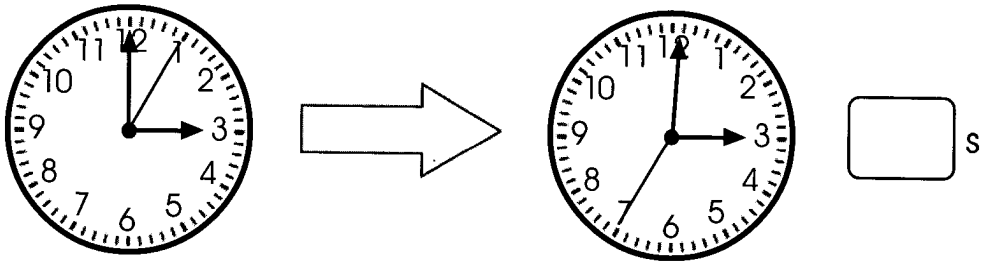


Ben: ____ s

Who is the fastest runner? ____

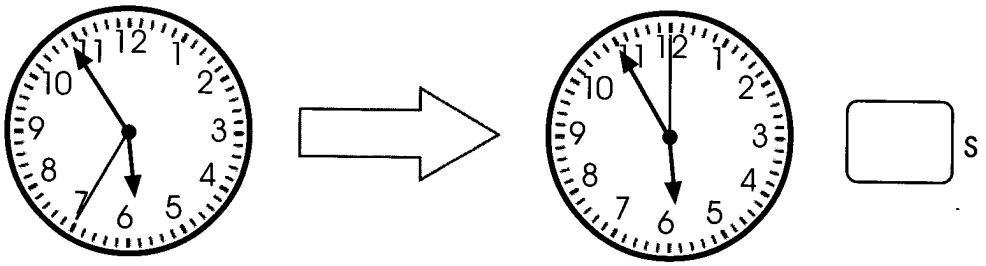
2. How many seconds have passed? Fill in the blanks.

(a)



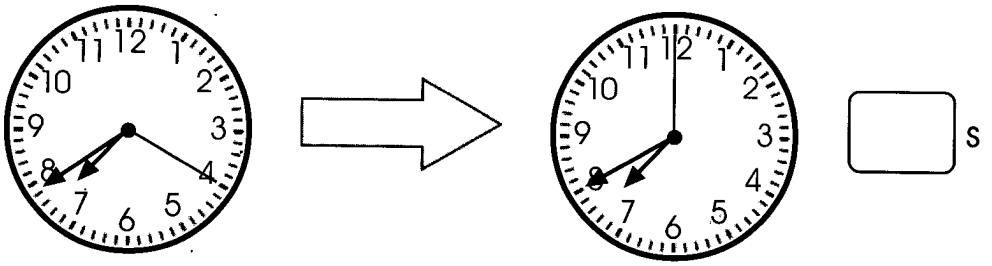
s

(b)



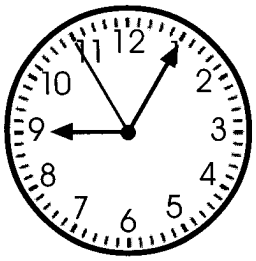
s

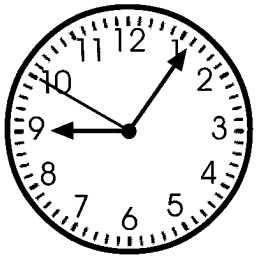
(c)



s

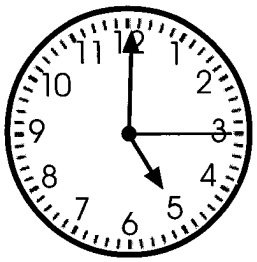
(d)

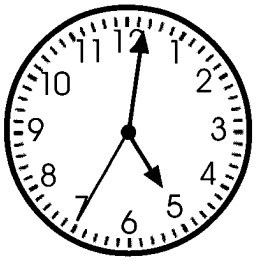




s

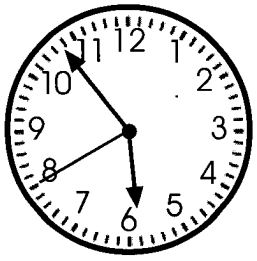
(e)

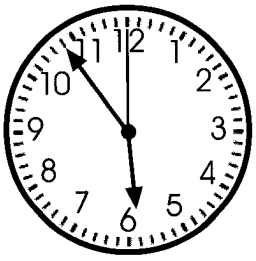




s

(f)





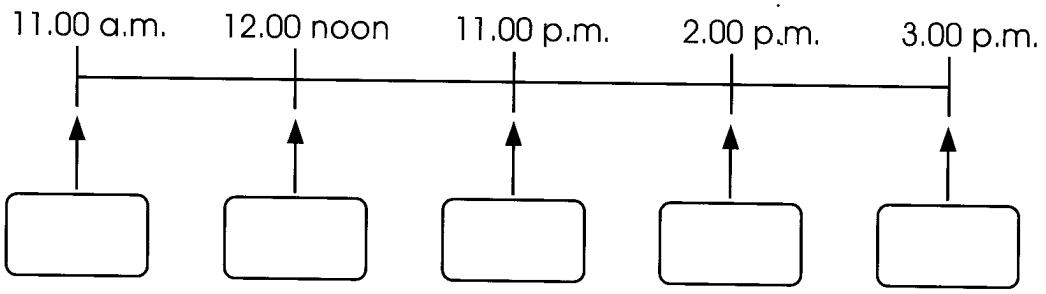
s

WORKSHEET 47

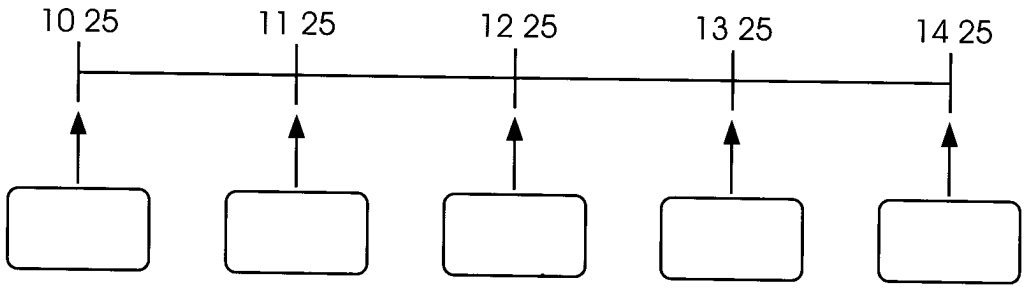
Date: _____

24-hour Clock

1. Complete the equivalent time in the 24-hour clock.



2. Complete the equivalent time in the 12-hour clock.



3. Change each time given in the 12-hour clock to the 24-hour clock.

12-hour clock	24-hour clock
(a) 6.00 a.m.	
(b) 9.10 a.m.	
(c) 12.00 noon	
(d) 2.40 p.m.	
(e) 8.04 p.m.	
(f) 12.00 midnight	
(g) 12.15 a.m.	
(h) 10.57 a.m.	

4. Change each time given in the 24-hour clock to the 12-hour clock.

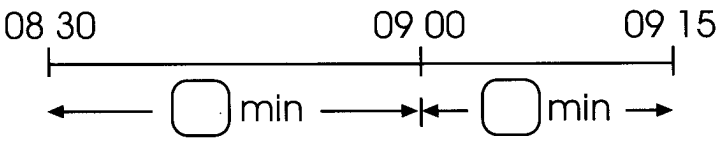
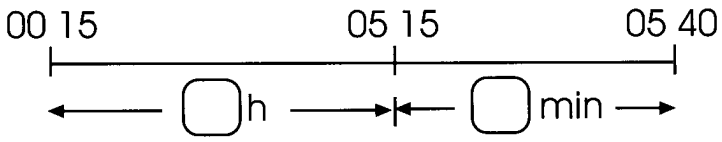
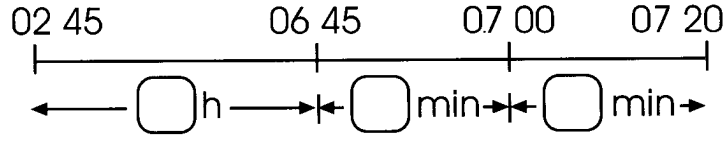
24-hour clock	12-hour clock
(a) 04 40	
(b) 08 50	
(c) 11 11	
(d) 13 27	
(e) 17 22	
(f) 20 40	
(g) 00 35	
(h) 00 08	

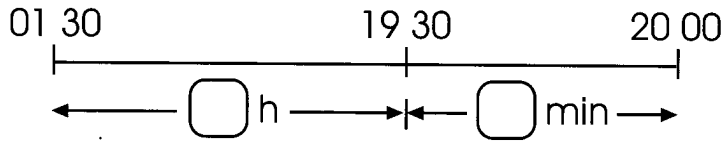
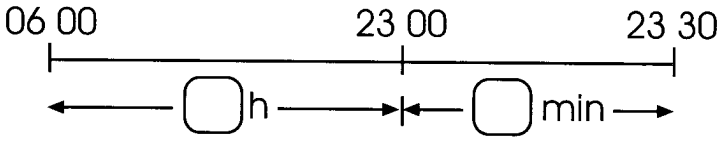
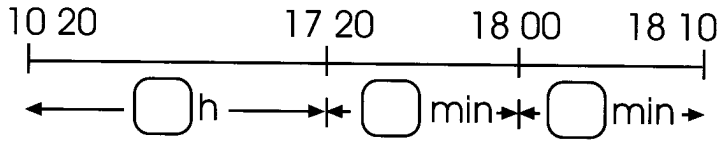
WORKSHEET 48

Date: ____

Duration of Time & Word Problems

1. Find the duration of time shown below:

	Duration
(a) From 08 30 to 09 15 	
(b) From 00 15 to 05 40 	
(c) From 02 45 to 07 20 	

	Duration
(d) From 01 30 to 20 00  	
(e) From 06 00 to 23 30  	
(f) From 10 20 to 18 10  	

2. A train left Tanjong Pagar Station at 09 45 and reached Johor Bahru Station after 30 min. At what time did the train reach Johor Bahru Station?

3. Robert went on a cruise from Singapore to Batam with his family. The ship left the port at 16 50 on Saturday. After travelling for 1 h 40 min, the ship arrived at Batam. Find the time of arrival at Batam.

4. On Monday, Jimmy's Mother spent 1 h 45 min doing housework and 2 h 25 min shopping. If she spent 30 min less watching a television programme than shopping, how much time did she spend altogether doing the three things?

5. John and Mary went to the airport last Sunday. John took a bus first, and it took him 30 min to reach the MRT station. Then he took the MRT and it took him 55 min to reach the airport. Mary left home 25 min later than John. She took a taxi, and she reached the airport 20 min earlier than John. How long did it take Mary to get to the airport?

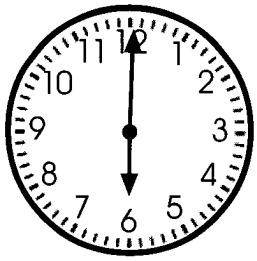
6. Shawn, Peter and Samuel took turns to paint a room. Shawn took 2 h 35 min to paint. Peter took 20 min less to paint. If Shawn, Peter and Samuel took a total of 5 h to paint the room, how long did Samuel take to paint?

7. Joanne had her piano lesson at 09 30. The lesson lasted 55 min. Then she rested for 15 min. After that, she did her homework for 2 h 20 min before she had her lunch. At what time did she have her lunch?

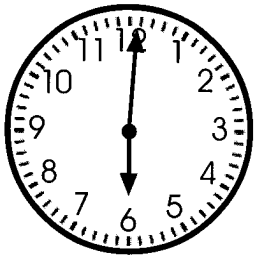
Practice 13

Date:

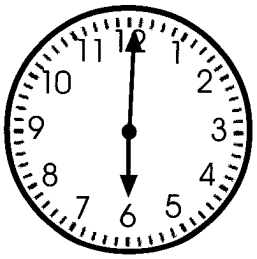
1. Draw the second hand on the clock.

(a) 

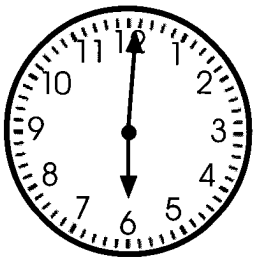
20 s

(b) 

55 s

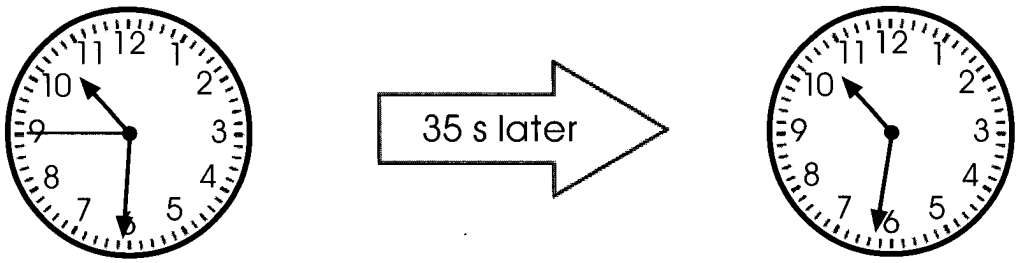
(c) 

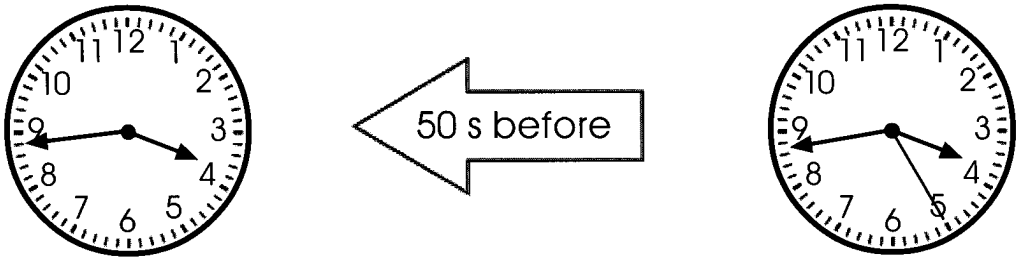
37 s

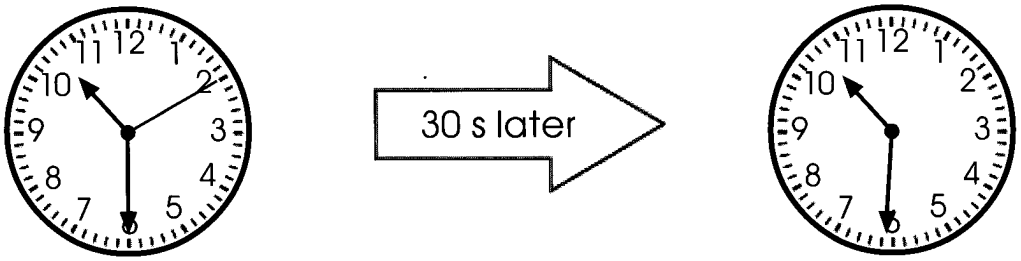
(d) 

42 s

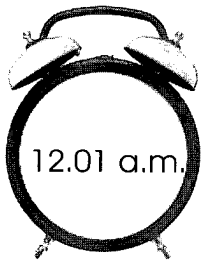
2. Draw the missing second hand.

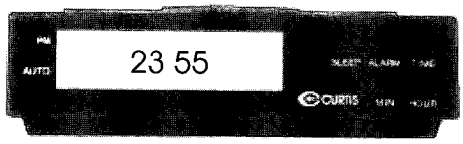


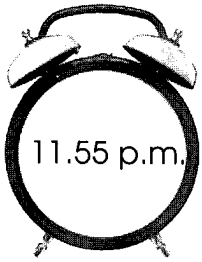


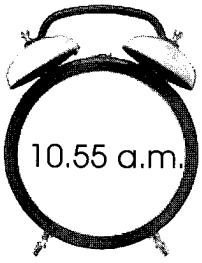


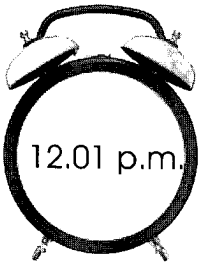
3. Match.











4. Find the duration of the time shown below:

(a) 06 10 to 10 30 on the same day.

(b) 05 30 to 08 20 on the same day.

(c) 11 15 to 14 00 on the same day.

(d) 00 15 to 22 30 on the same day.

5. Hanif travelled by car with his father from their home to the supermarket. He checked the time they left the house and the time they arrived at the supermarket using his digital watch. He recorded the times as shown below. How long did Hanif take to travel by car from his home to the supermarket?

Time left	:	11 55
Time arrived	:	12 32

6. The MRT train left Newton station at 12 41 and reached Jurong East station at 13 10. How long did the train journey take?

7. John sat for a test last week. The test started at 07 40 and was to end at 11 10. However John finished his test 45 min earlier. At what time did John finish his test?

8. Mr. Lim went to Kuala Lumpur last Sunday. He arrived there at 13 25. He spent 2 h 20 min to meet a customer and 2 h 50 min to attend a conference. He also spent some time having dinner with a friend. Then he left Kuala Lumpur at 20 40. How long did he spend on the dinner?

14 Tessellations

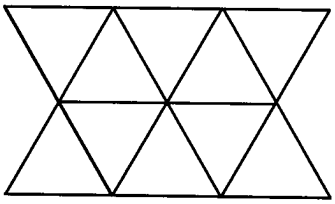
WORKSHEET 49

Date: _____

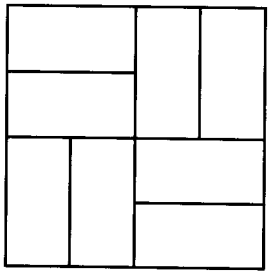
Recognising Tessellations

1. Identify and colour the unit shape used in each tessellation shown below.

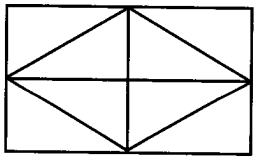
(a)



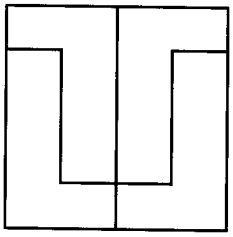
(b)



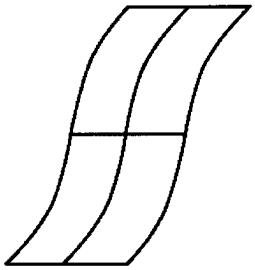
(c)



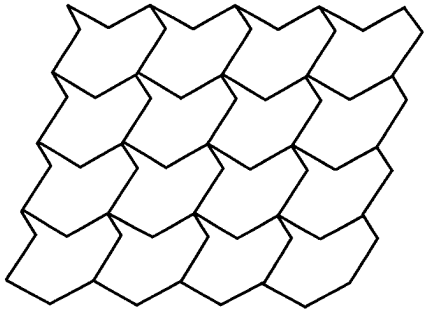
(d)



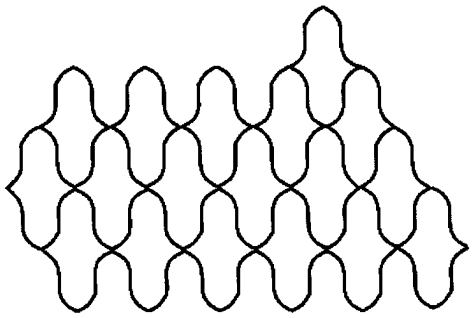
(e)



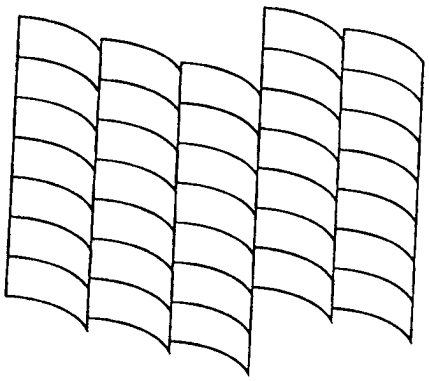
(f)



(g)

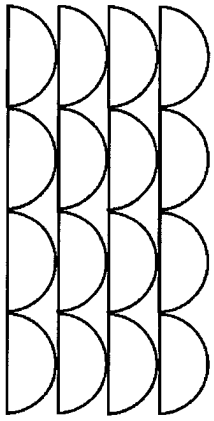


(h)

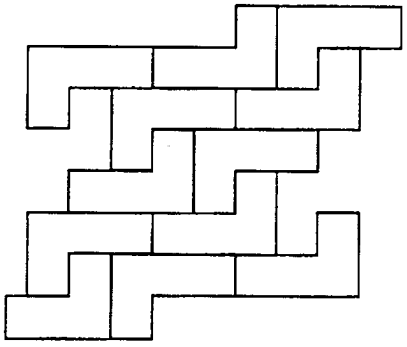


2. Which of the following are tessellations? Answer ' Yes' or 'No'.

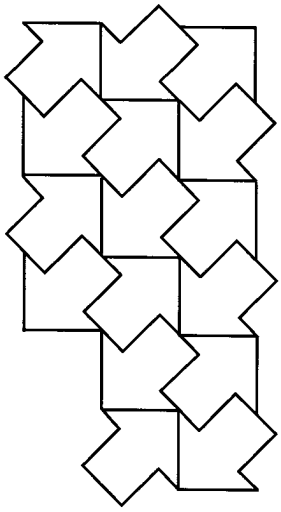
(a)



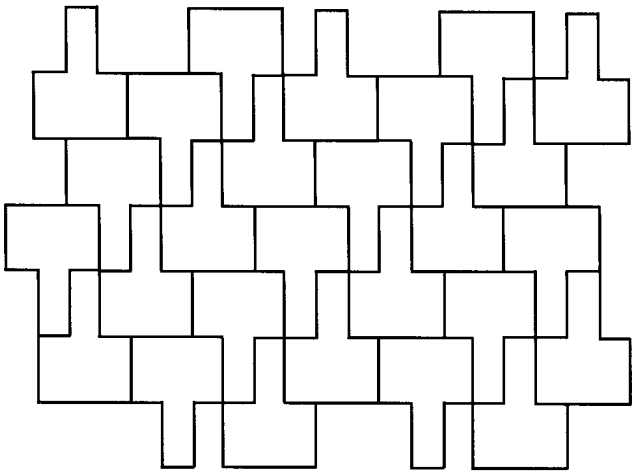
(b)



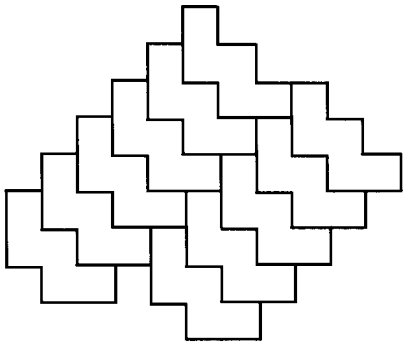
(c)

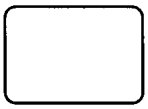


(d)

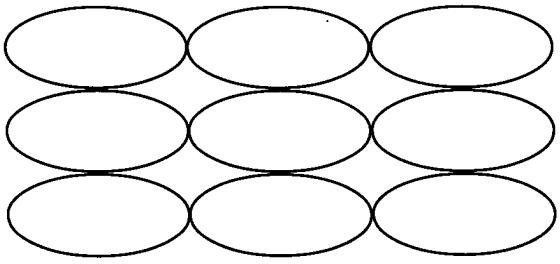


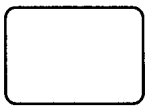
(e)



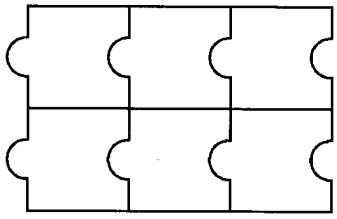


(f)

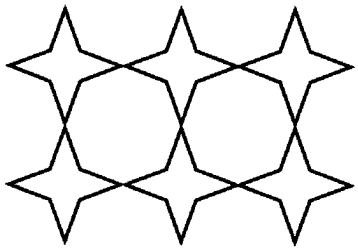




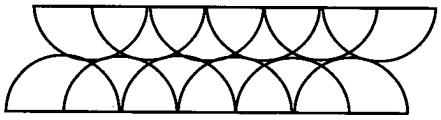
(g)



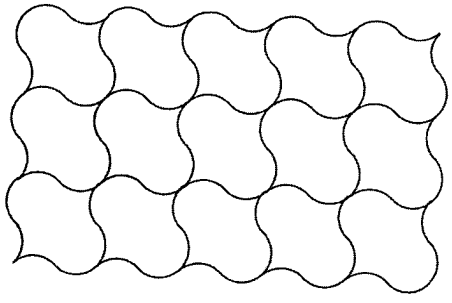
(h)



(i)

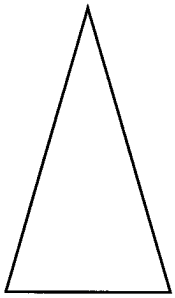


(j)

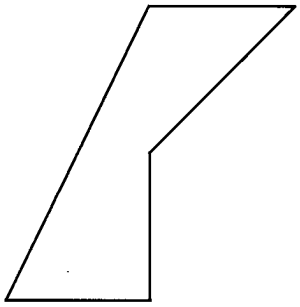


3. Which of the following shapes tessellate? If it does, put a tick in the box. (Hint: Make copies of the shapes and use them to help you.)

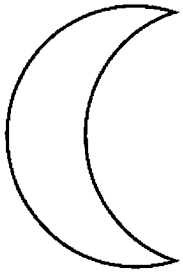
(a)



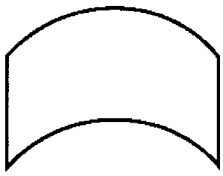
(b)



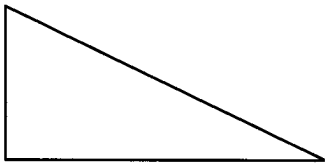
(c)



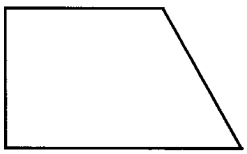
(d)



(e)



(f)



(g)

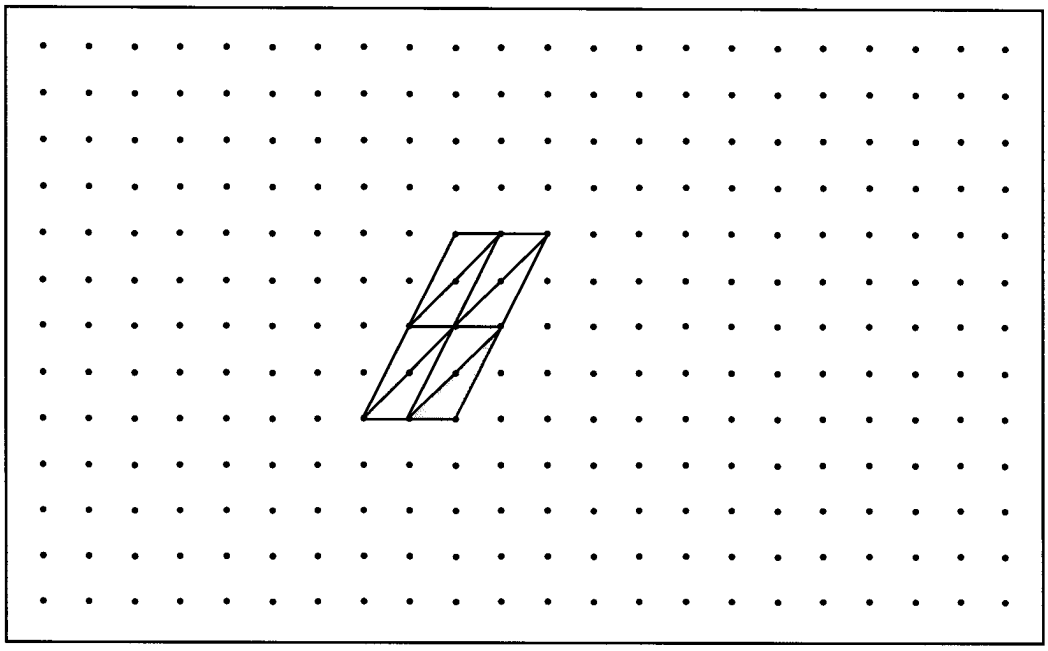
WORKSHEET 50

Date:

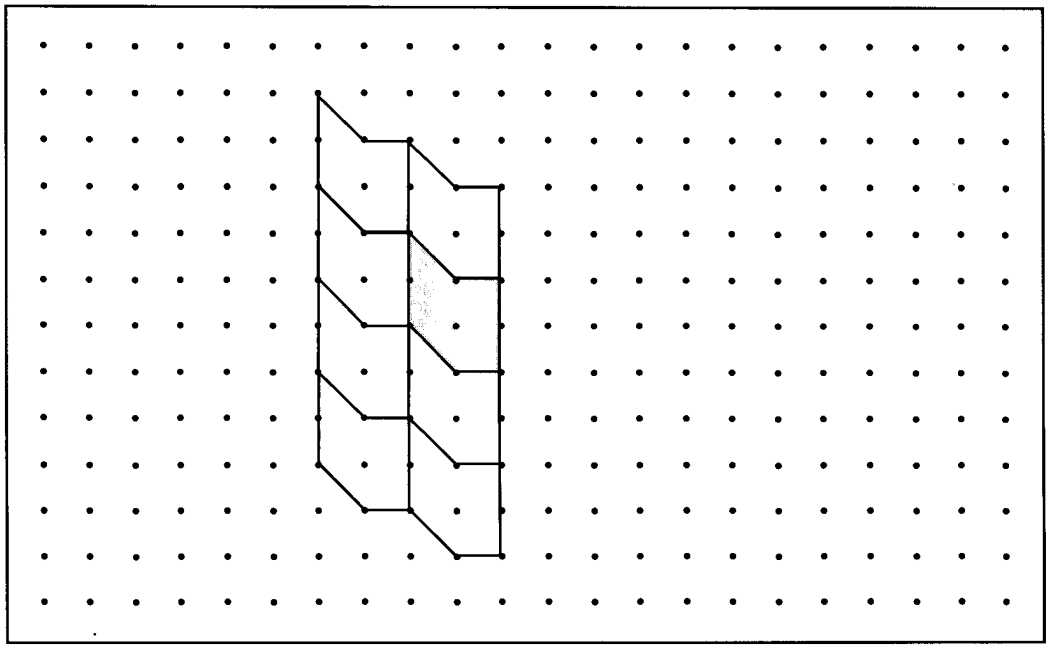
Drawing Tessellations

1. Use the unit shape to continue the tessellation in the space provided.

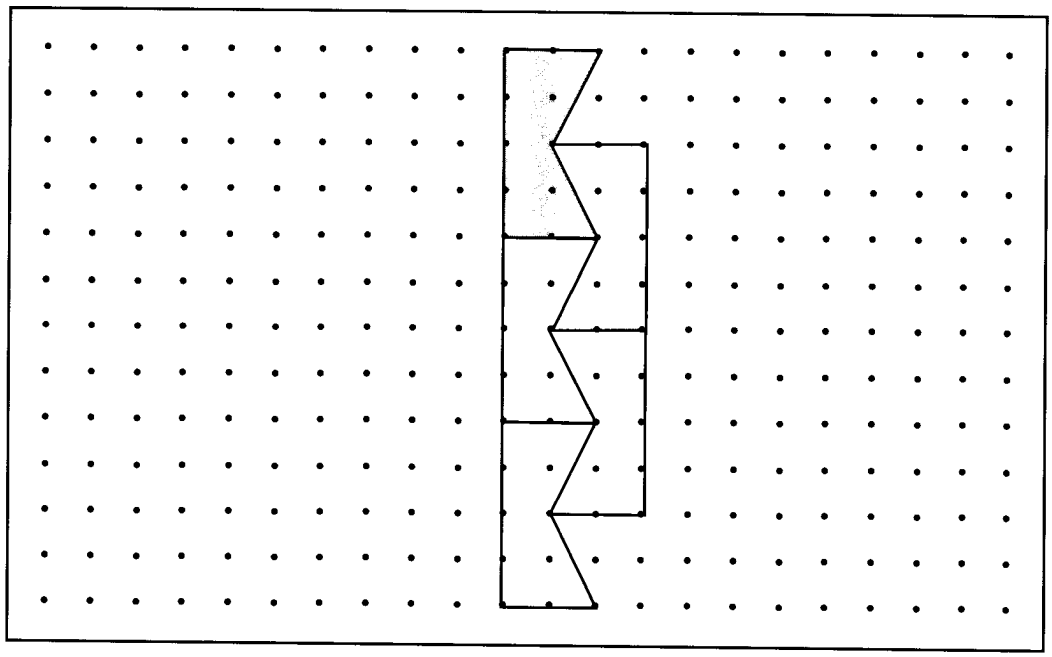
(a)



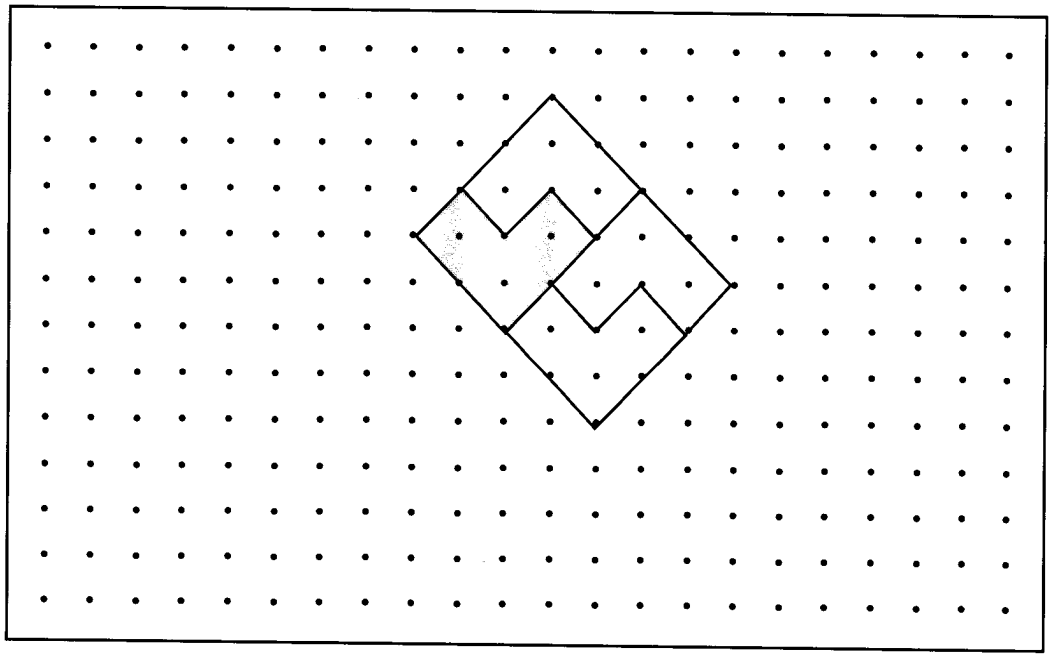
(b)



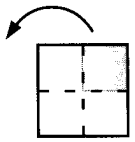
(c)



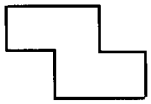
(d)



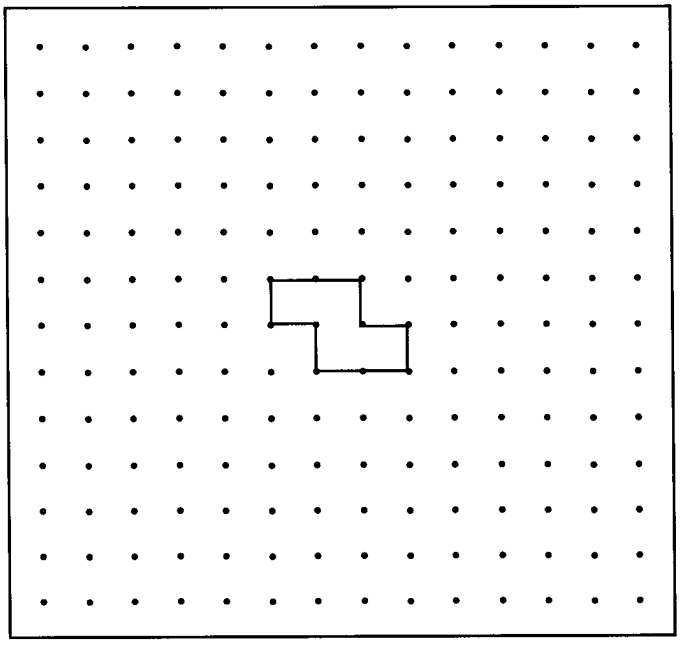
2.



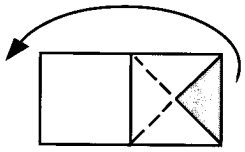
(a) From a square, the shaded part is moved to form this shape:



(b) Use the dot grid below to tessellate this shape.

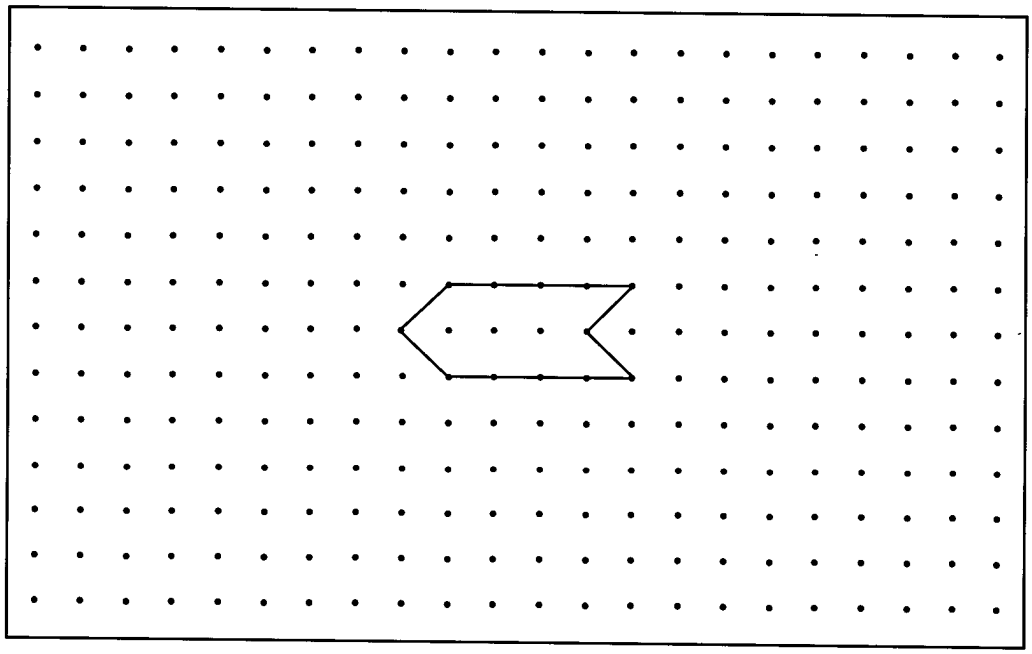


3.



(a) From a rectangle, the shaded triangle is moved to form this shape:

(b) Use the dot grid below to tessellate this shape.

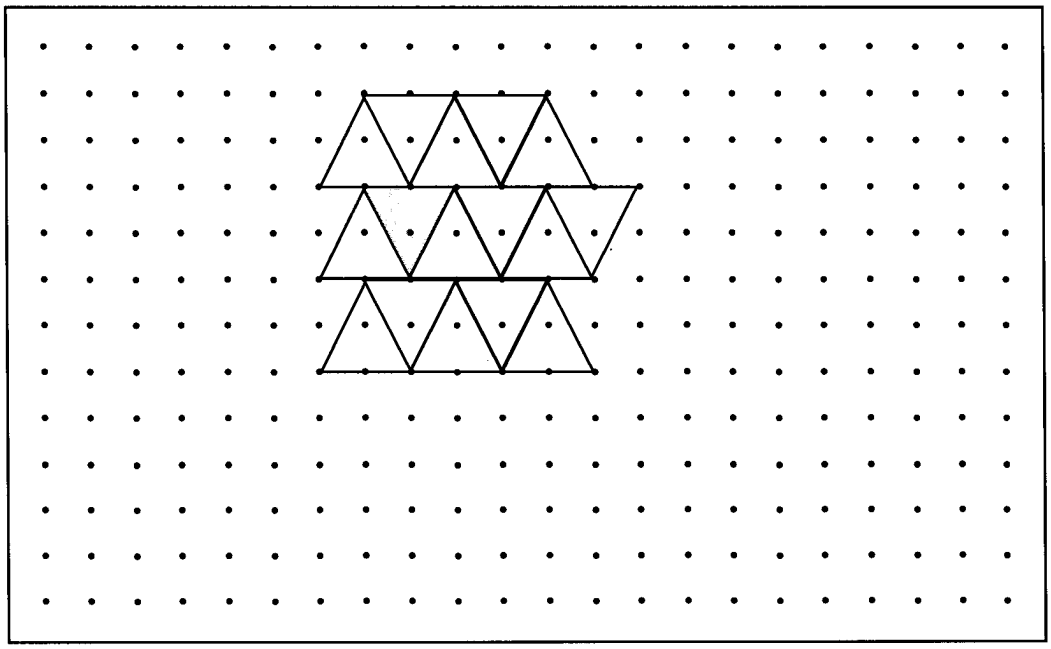


Practice 14

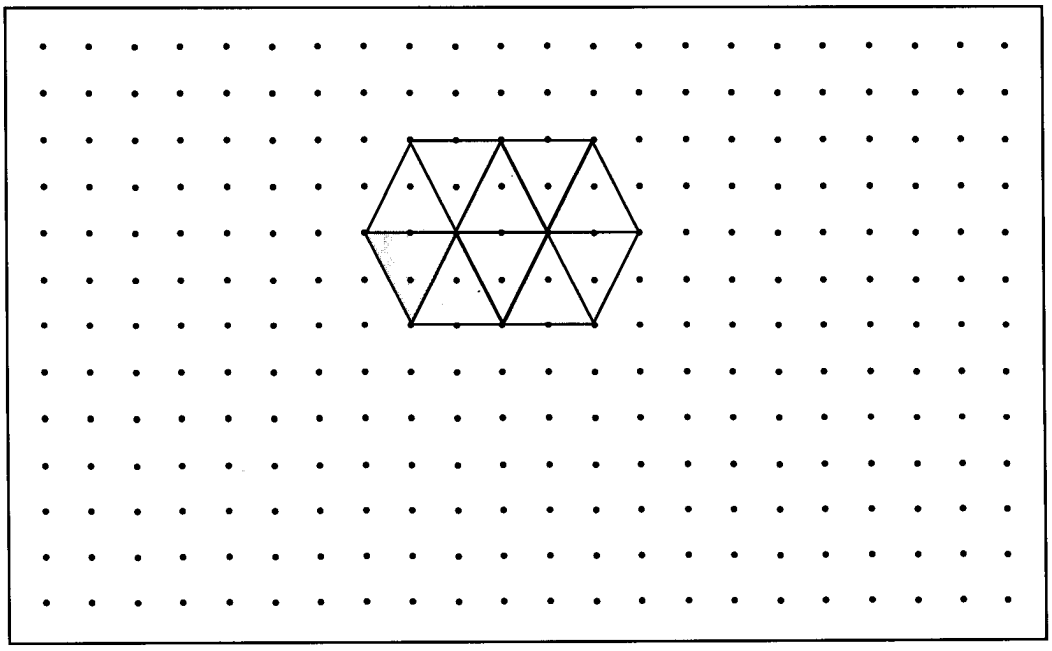
Date:

1. Use the unit shape to continue the two different tessellations.

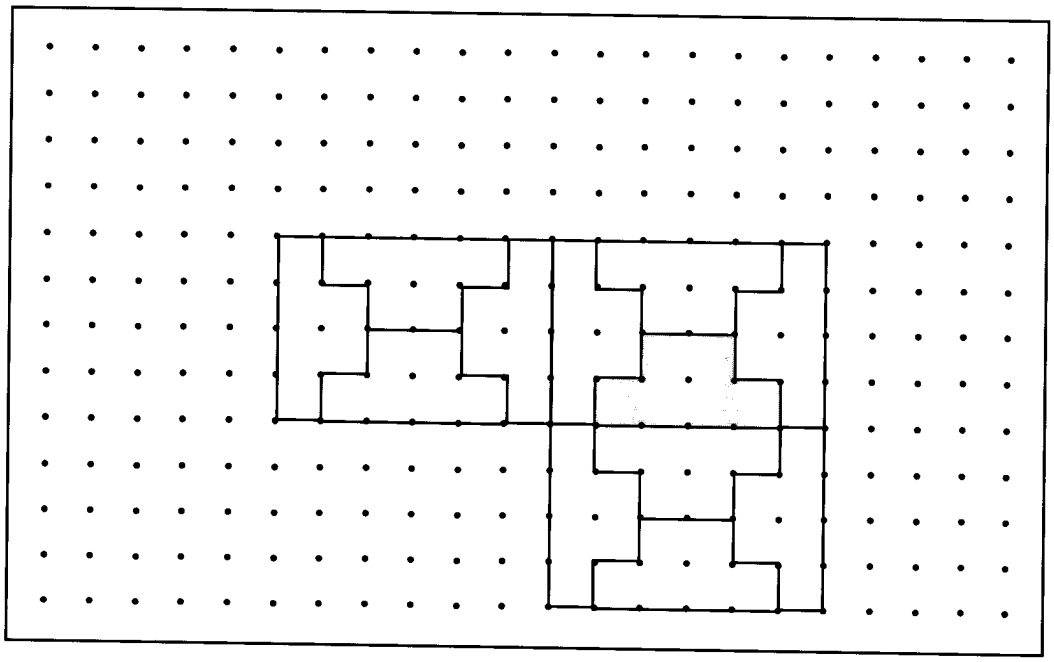
(a) Tessellation 1



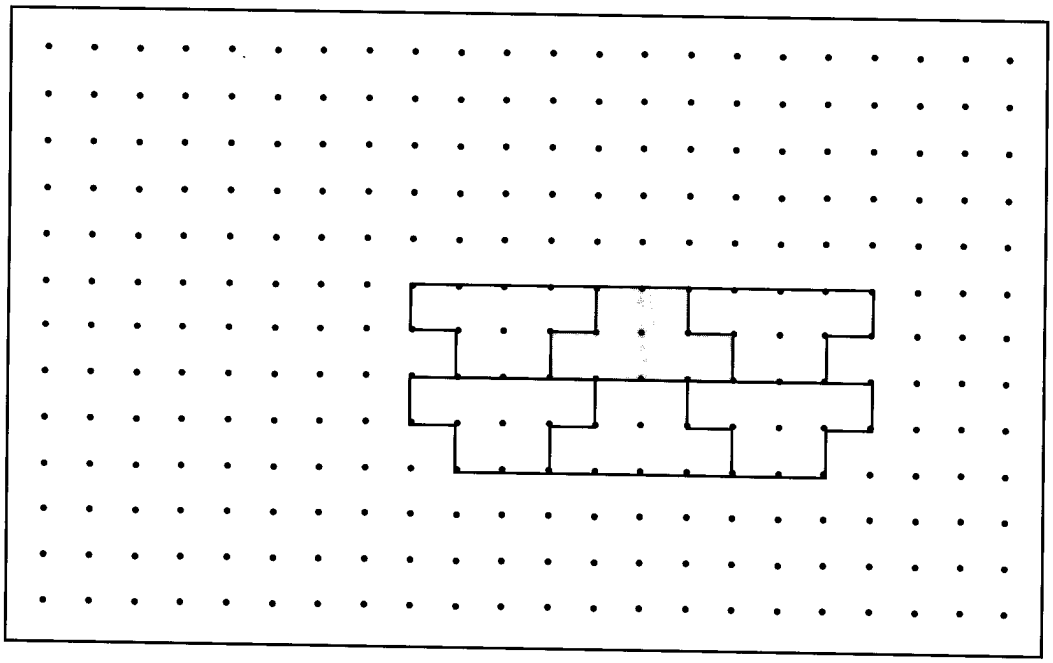
Tessellation 2



(b) Tessellation 1



Tessellation 2

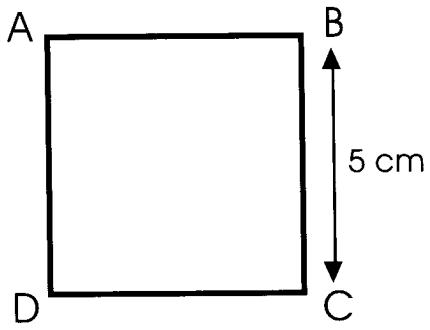


Revision 4A

Date: ____

1. Fill in the boxes.

(a) ABCD is a square.



AB // ____

AD // ____

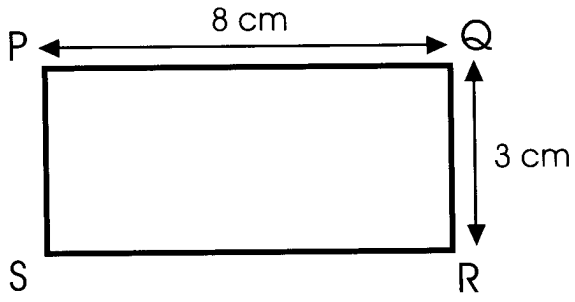
CD ⊥ ____

AB ⊥ ____

CD = ____ cm

AD = ____ cm

(b) PQRS is a rectangle



PQ // ____

QR // ____

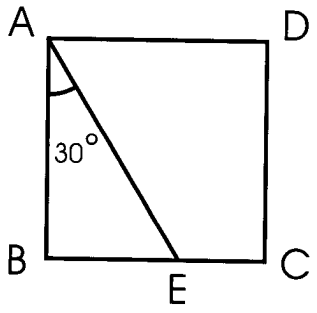
PQ ⊥ ____

SR ⊥ ____

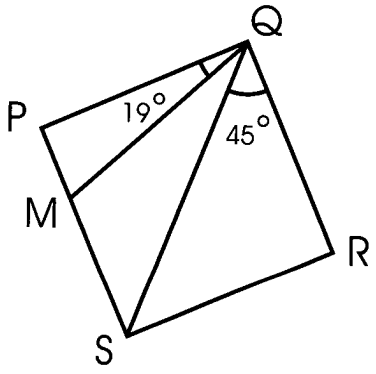
PS = ____ cm

RS = ____ cm

2. ABCD is a square. If $\angle BAE = 30°$, find $\angle EAD$.



3. PQRS is a square. If $\angle PQM = 19°$ and $\angle RQS = 45°$, find $\angle MQS$.



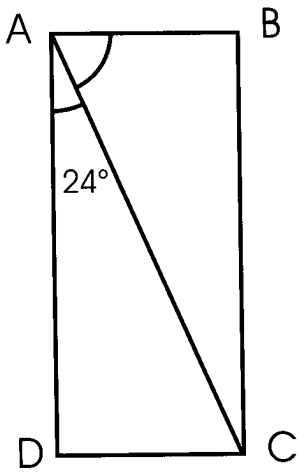
4. Change the following times to the 24-hour clock.

12-hour clock	24-hour clock
(a) 7.50 a.m.	
(b) 3.15 p.m.	
(c) 12.20 a.m.	
(d) 12.50 p.m.	
(e) 2.20 a.m.	

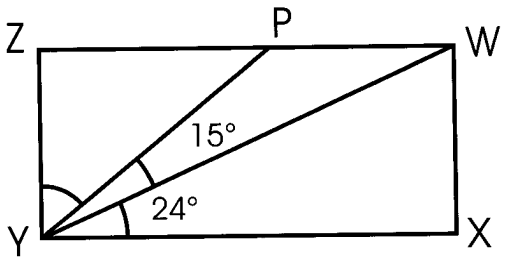
5. Change the following times to the 12-hour clock.

24-hour clock	12-hour clock
(a) 08 10	
(b) 20 45	
(c) 00 34	
(d) 12 10	
(e) 15 35	

6. ABCD is a rectangle. $\angle CAD = 24°$. What is the size of $\angle CAB$?

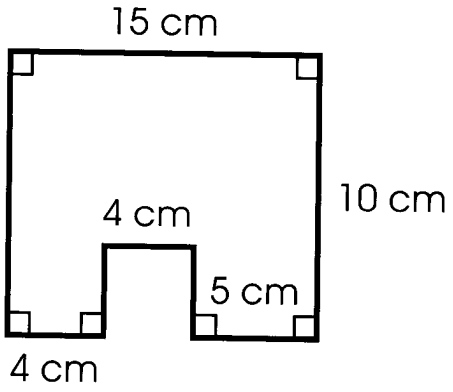


7. WXYZ is a rectangle. If $\angle WYX = 24°$ and $\angle PYW = 15°$, find $\angle PYZ$.

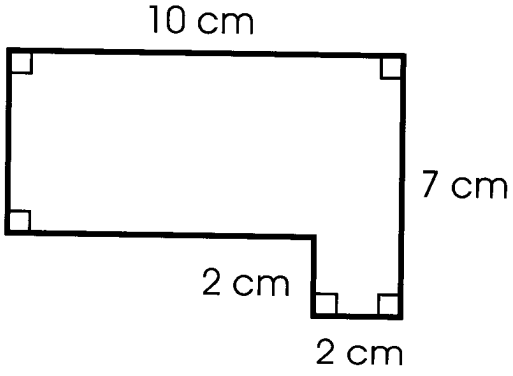


8. Find the areas of the following shapes.

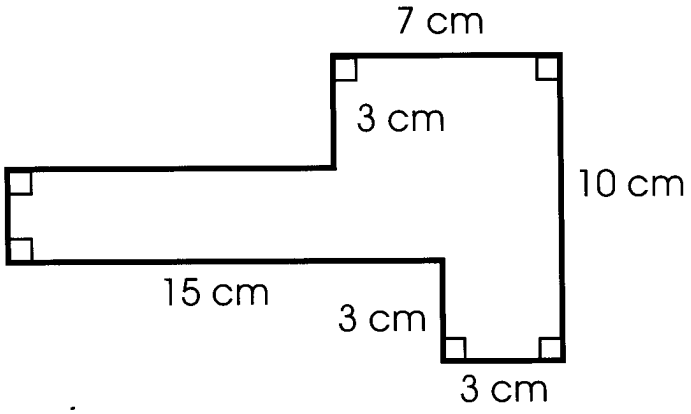
(a)



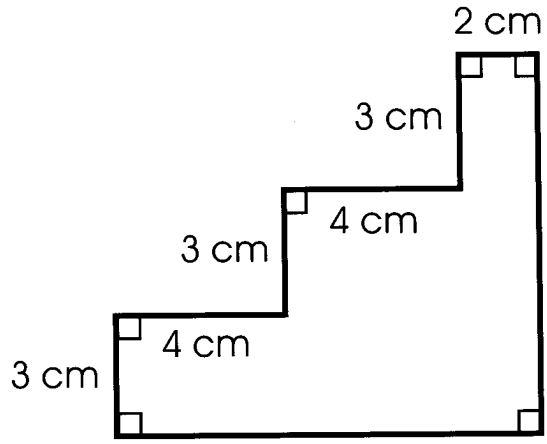
(b)



(c)

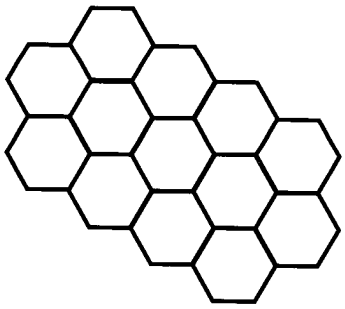


(d)

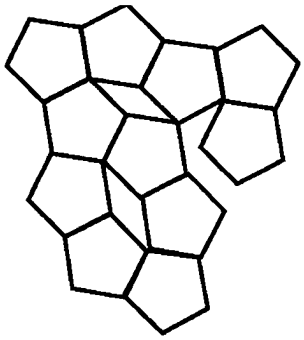


9. Which of the folllowing are tessellations?
For those which are tessellations, colour the unit shape.

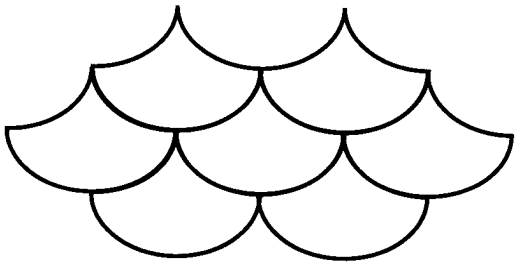
(a)



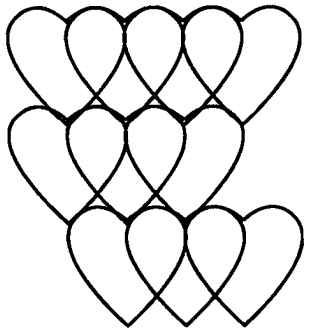
(b)



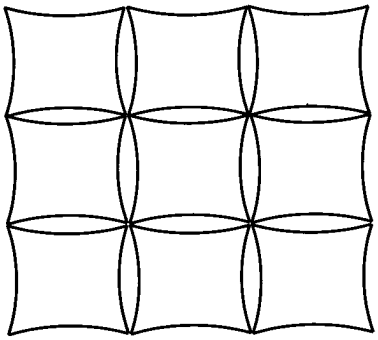
(c)



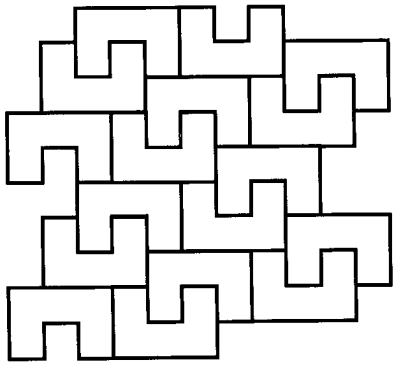
(d)



(e)

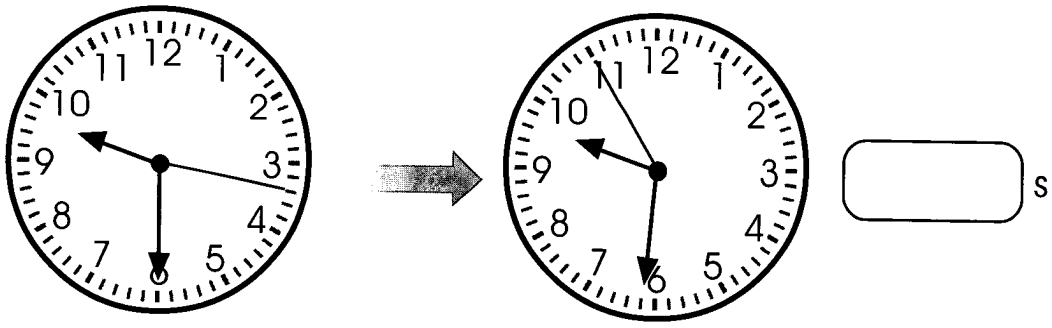


(f)



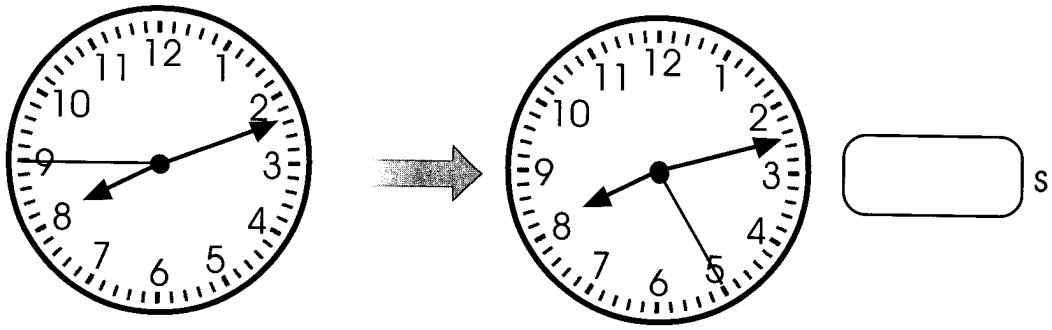
10. How many seconds have passed?

(a)



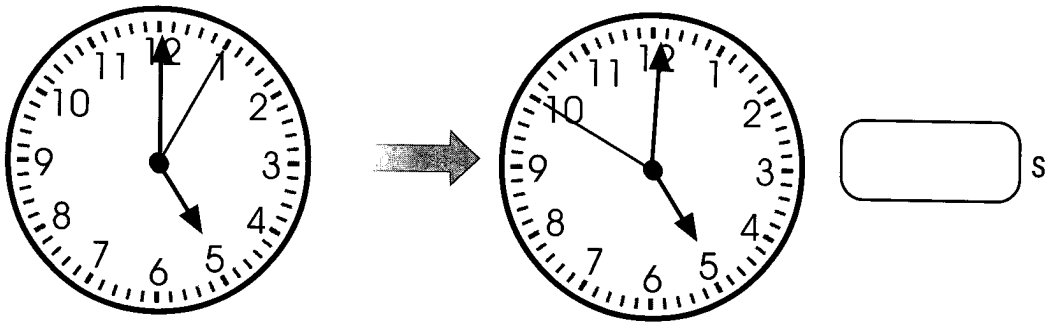
s

(b)



s

(c)



s

11. Find the length of the unknown side and the perimeter of each of the following figures. Complete the table below.

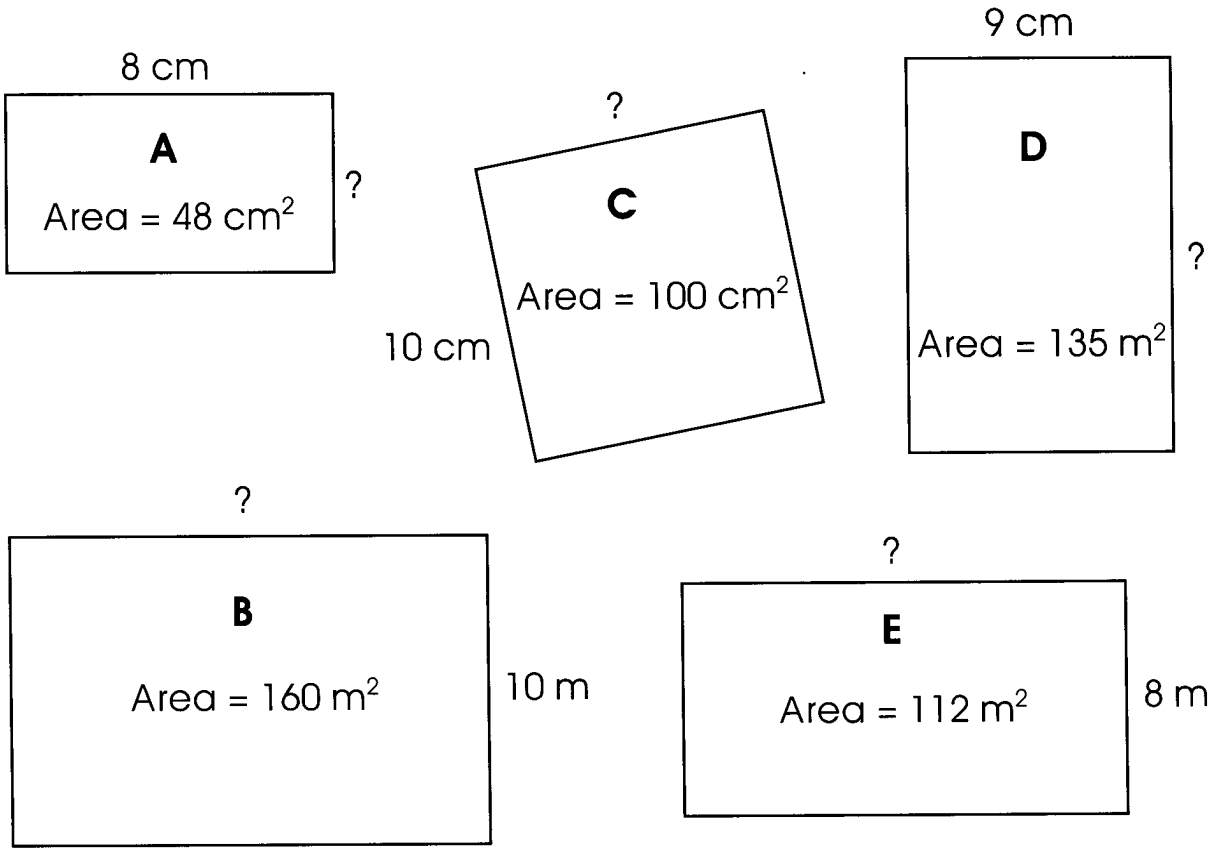
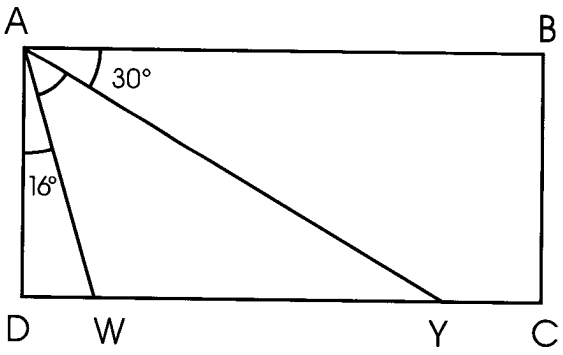
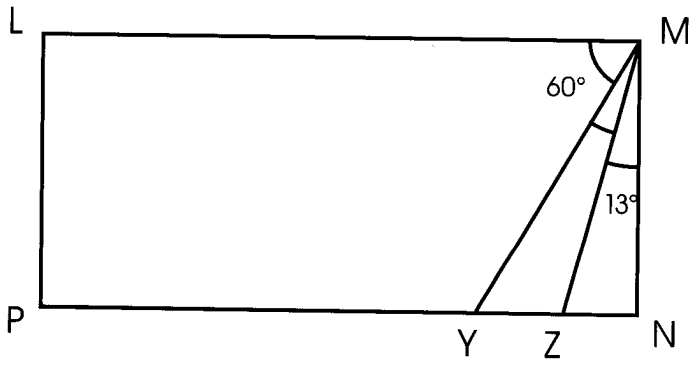


Figure	Area	Length	Breadth	Perimeter
A				
B				
C				
D				
E				

12. ABCD is a rectangle. ∠DAW is 16° and ∠YAB is 30°. Find ∠WAY.



13. LMNP is a rectangle. ∠YML = 60° and ∠NMZ 13°. Find the value of ∠YMZ.



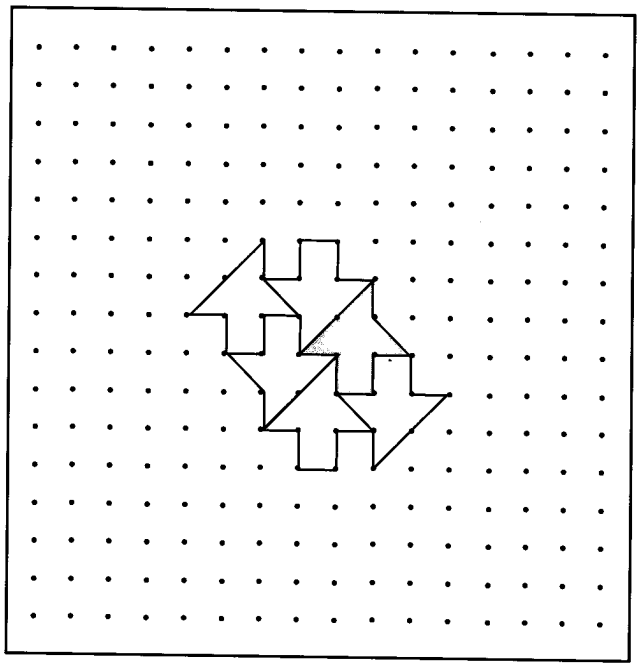
14. A music class starts at 20 45 and ends at 22 05. How long does the class last?

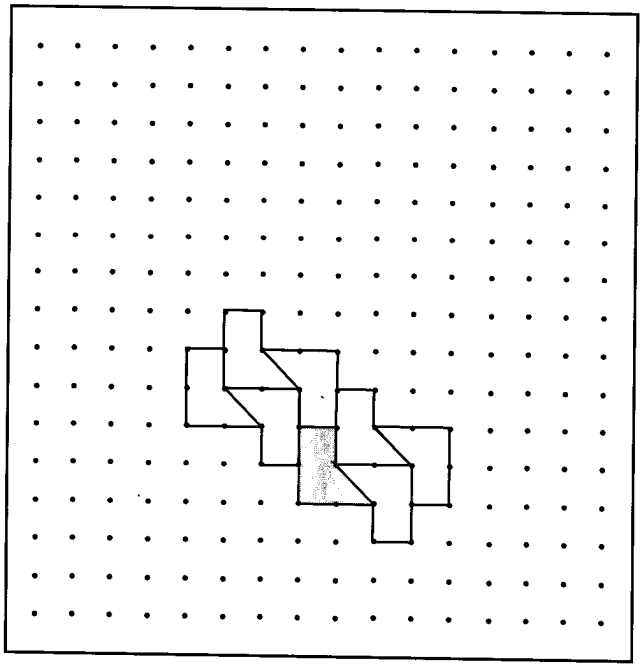
15. Jane finished her dinner at 19 10. After dinner, she spent 35 min to take a walk. Then she spent 1 h 45 min to do her homework. After that, she watched a television programme until 22 30. How long was the television programme?

Revision 4B

Date:

1. Continue each tessellation in the space provided using the unit shape.





2. Find the area and perimeter of each figure.

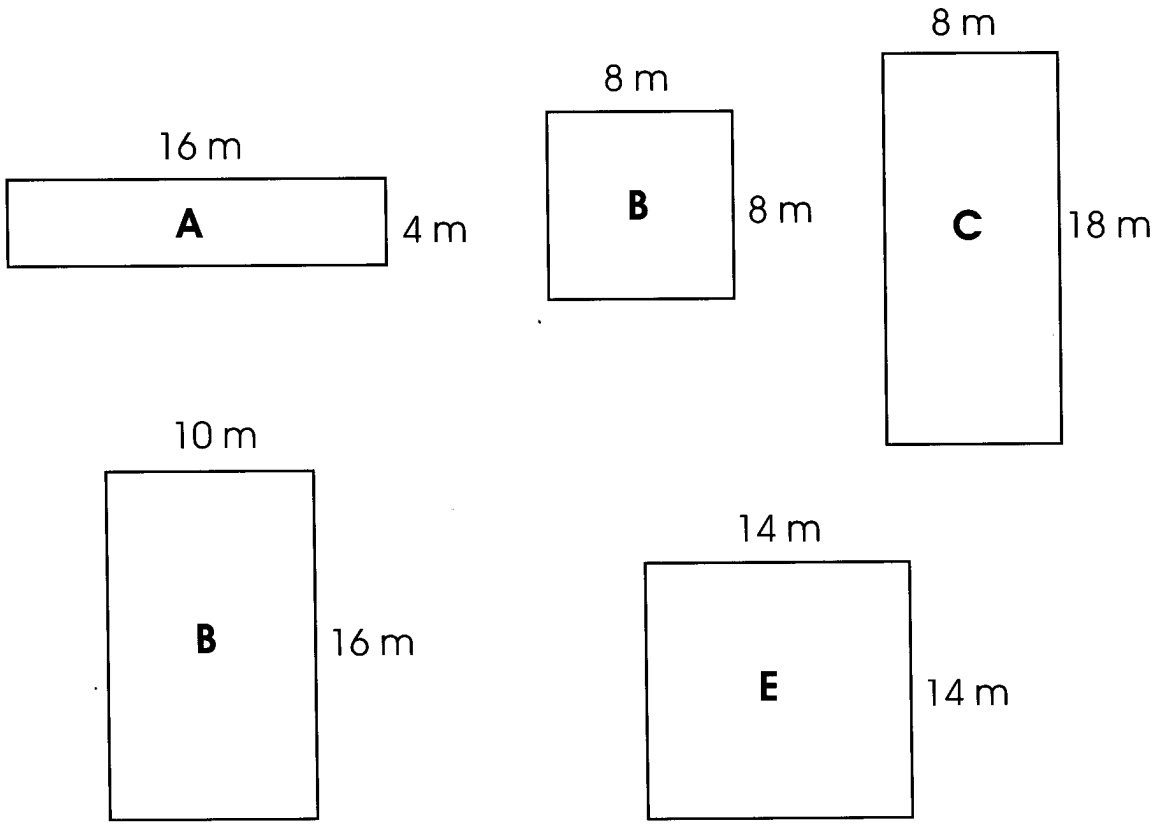
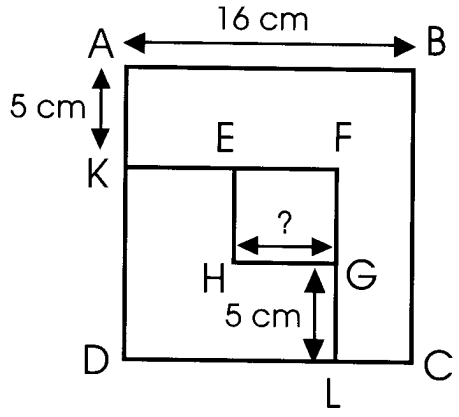


Figure	Area	Perimeter
A		
B		
C		
D		
E		

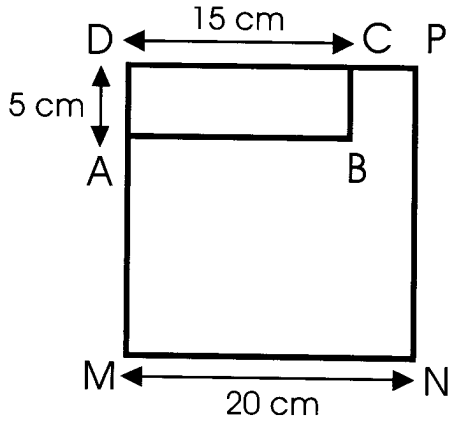
3. In the figure shown, there are three squares ABCD, EFGH and KFLD. Find the length of HG, given that AB = 16 cm, AK = 5 cm and GL = 5 cm.



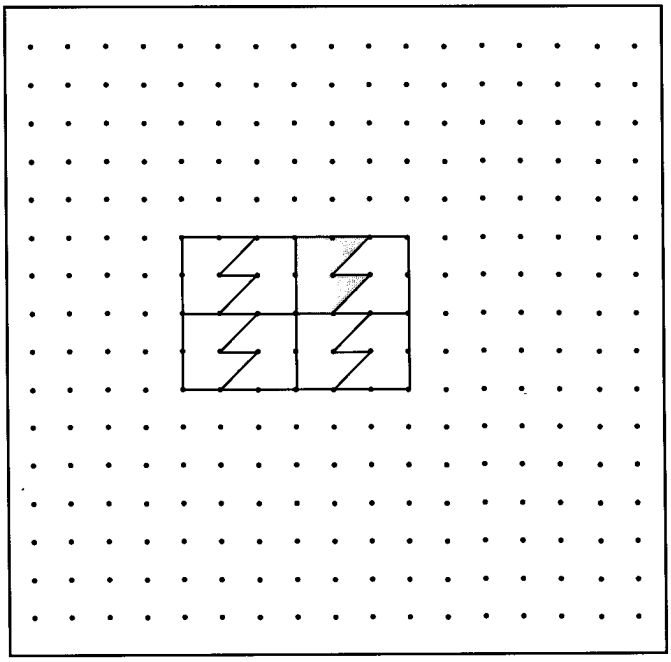
4. In the figure shown, ABCD is a rectangle and MNPD is a square. What are the lengths of

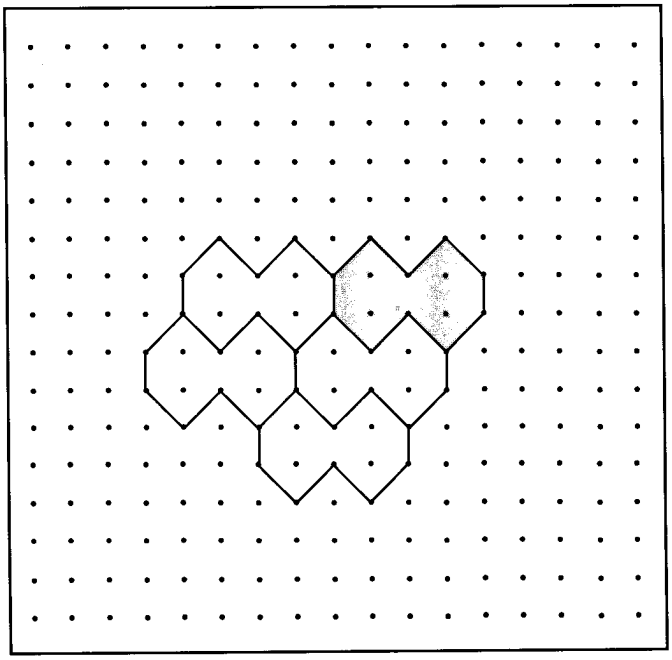
(a) AM

(b) CP?



5. Continue each tessellation in the space provided using the unit shape.





6. Find the duration shown below.

(a) From 09 10 to 15 30

(b) From 00 15 to 13 30

(c) From 12 40 to 19 25

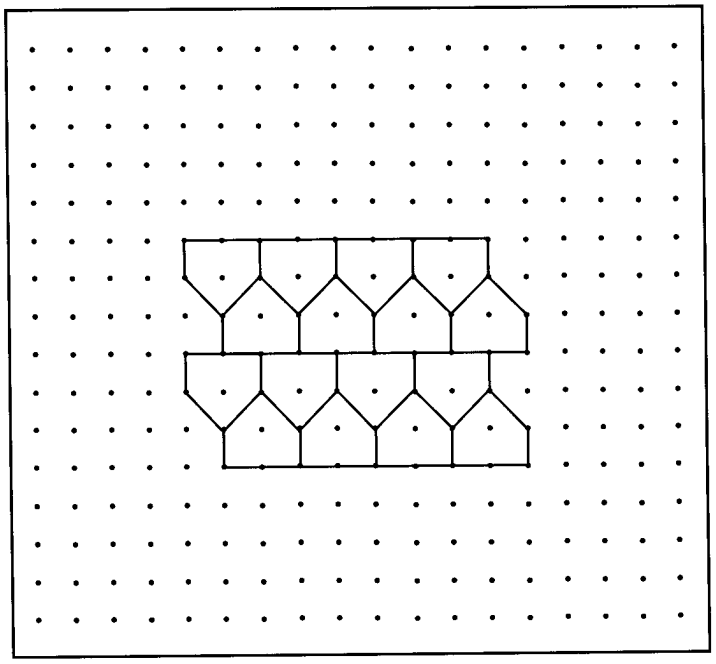
(d) From 08 35 to 11 20

(e) From 10 15 to 21 10

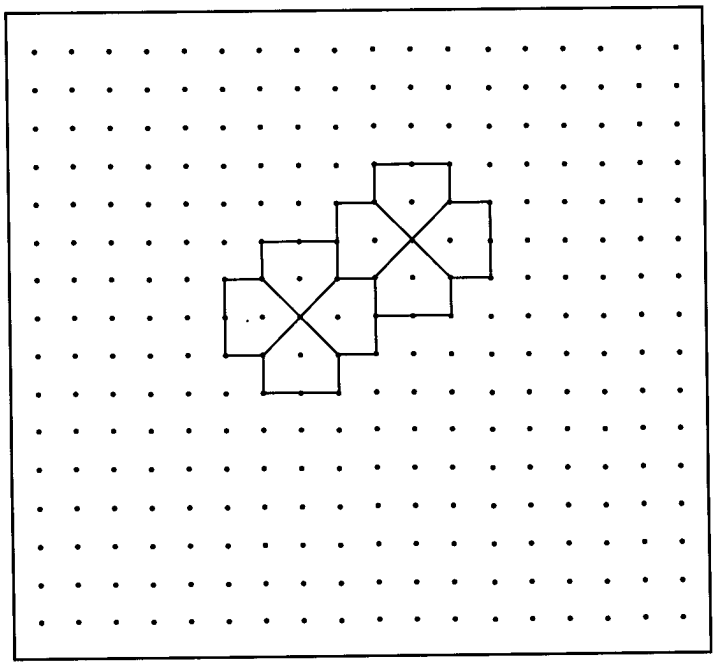
(f) From 00 15 to 19 05

7. Use the given shape to make two different tessellations.

Tessellation 1



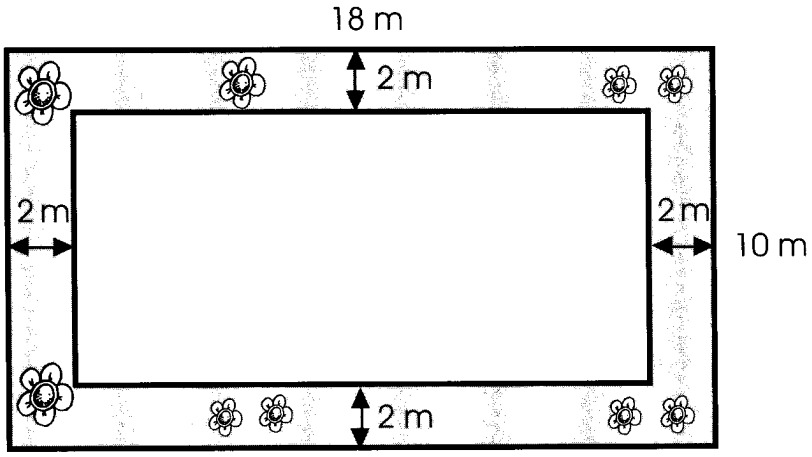
Tessellation 2



8. The area of a rectangle is 72 cm^2. If the breadth of the rectangle is 6 cm, find the perimeter of the rectangle.

9. A roll of wire 88 cm long is cut into 2 pieces to form 2 squares. If the first piece of wire is 36 cm long, find the area of the square formed by the second piece of wire.

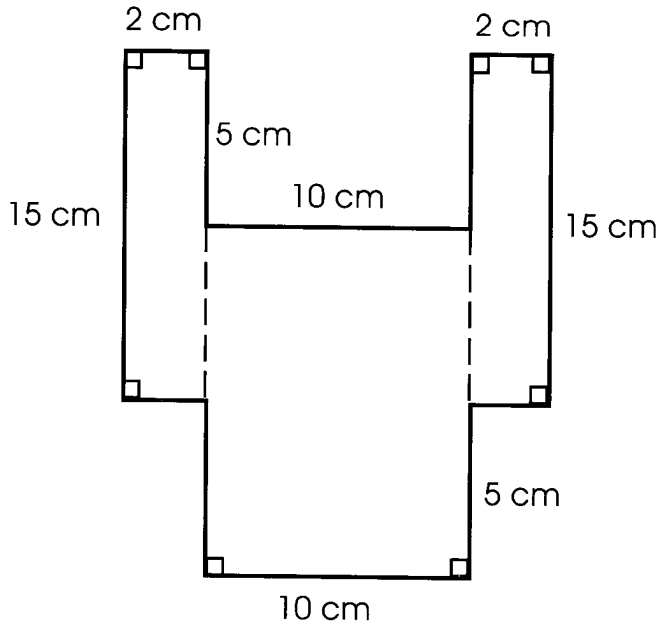
10. Peter's rectangular garden is 18 m long and 10 m wide. It has a flower border of 2 m as shown below (shaded part). Find the area of the border.



11. Joyce made a card as shown in the figure below. Find

(a) the area and

(b) the perimeter of the figure.



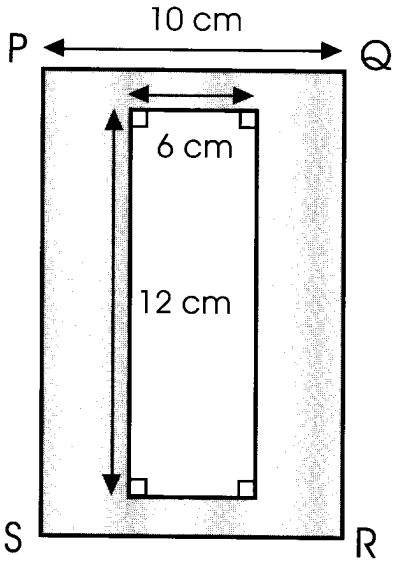
12. Mike travelled from Singapore to Hong Kong for a holiday. The plane left Changi Airport at 02 20. The journey lasted 4 h 35 min. At what time did he arrive at Hong Kong?

13. A man starts work at 08 00. He has lunch break from 12 30 to 13 15. He works until 20 35. How long does he work?

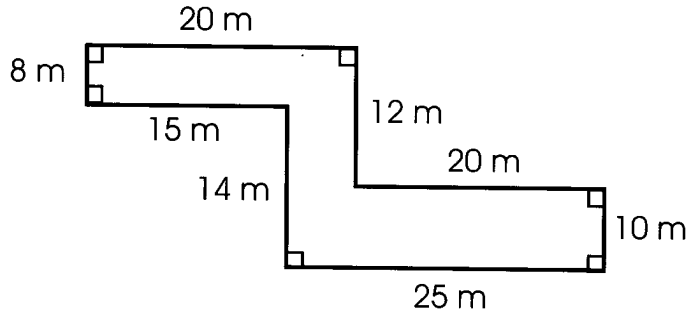
14. The area of the rectangle PQRS is 180 cm^2. If PQ = 10 cm, find

(a) the length of QR,

(b) the area of the shaded part.



15. Find the area and perimeter of the figure below.



16. Susan started to do her homework at 19 20 and finished it at 21 15. Her brother, John, started to do his homework at 20 00. John spent 1 h less on his homework than Susan. When did John finish his homework?

17. Maria reached Johore at 08 30 and left at 17 35. John reached Johore at 08 10 and left at 20 10. How much longer than Maria did John stay in Johore?