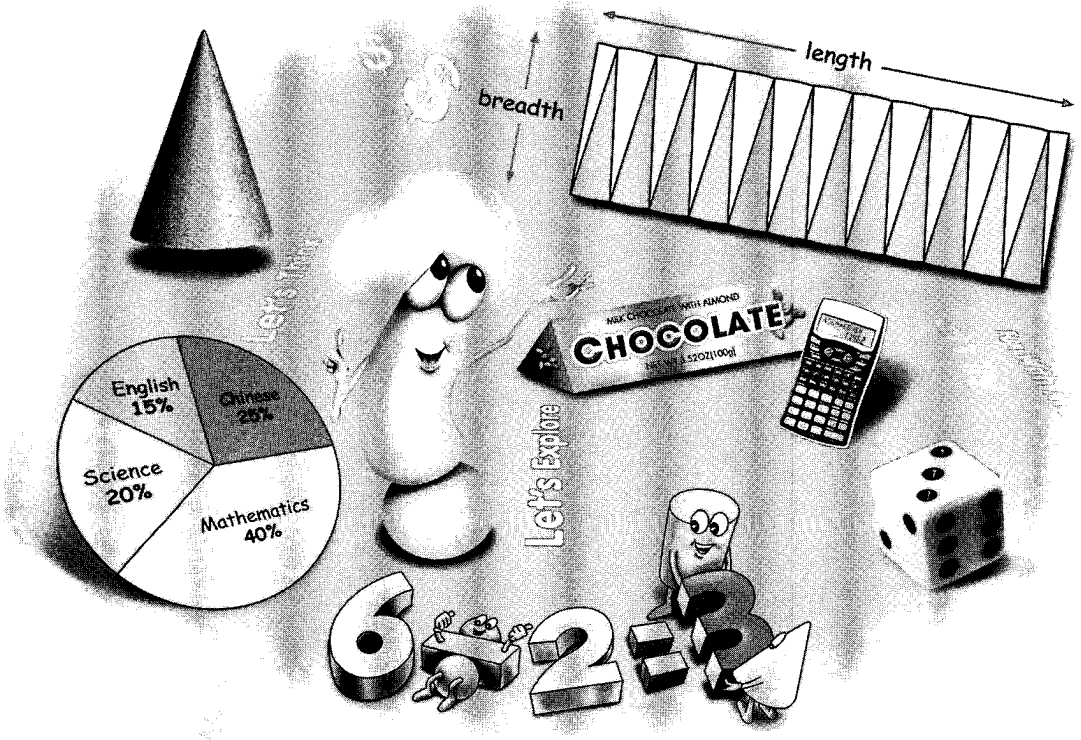
New Syllabus

# Primary Mathematics

## 6A WORKBOOK 1

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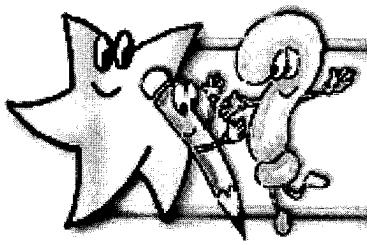

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## 1. Algebra



## 2. Solid Figures

## 3. Ratio

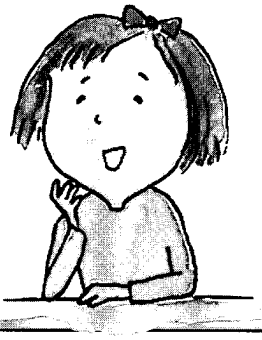
# 1 Algebra

## WORKSHEET 1

Date: ☐

## Unknown Quantities and Algebraic Expressions

**1.** Replace ☐ by a letter of your choice. Where necessary, rewrite the expression in the simplest form.



Example ☐ × 3 + 2

$= y \times 3 + 2$

$= 3y + 2$

| | |
|---|---|
| (a) ☐ + 4 | (b) ☐ − 1 |
| (c) 2 − ☐ | (d) 3 + ☐ |
| (e) $\frac{\square}{5}$ | (f) $\frac{\square + 7}{3}$ |
| (g) $\frac{5 - \square}{4}$ | (h) ☐ × 4 + 8 |
| (i) ☐ × 5 − 3 | (j) 6 − ☐ × 2 |

**2.** Write the following statements as algebraic expressions.

(a) 10 is added to $x$.

(b) 4 is subtracted from $y$.

(c) The sum of $m$ and 8.

(d) The product of $p$ and 5.

(e) The sum of 7 and $2n$.

(f) The difference between $3x$ and 9.

(g) Add $p$ and 4. Then divide the sum by 3.

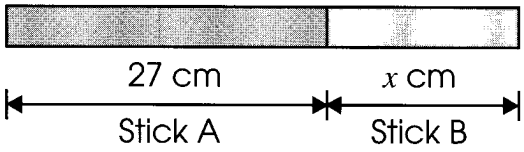
(h) Subtract 10 from $x$. Then divide the difference by 7.

(i) 2 is added to $4k$.

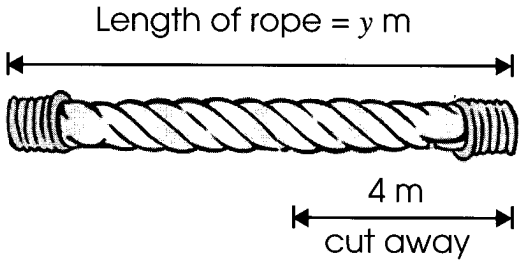
(j) 5 is subtracted from $6q$.

**3.** Form an algebraic expression in each of the following.

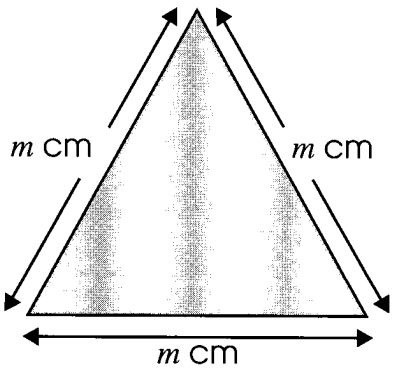
(a) Stick A is 27 cm. Stick B is $x$ cm. What is the total length of the two sticks?



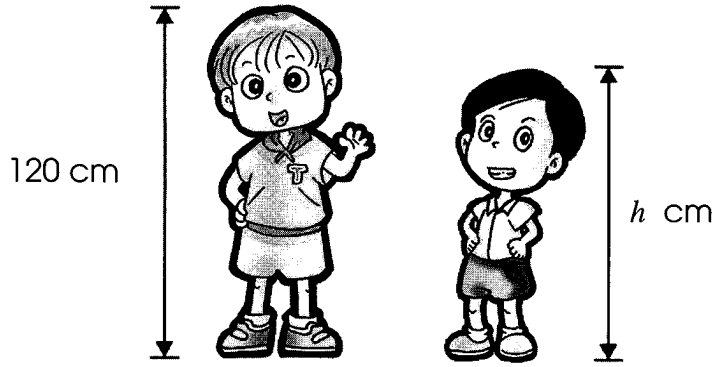

(b) The length of a piece of rope is $y$ m. 4 m is cut away. What is the remaining length of the rope?



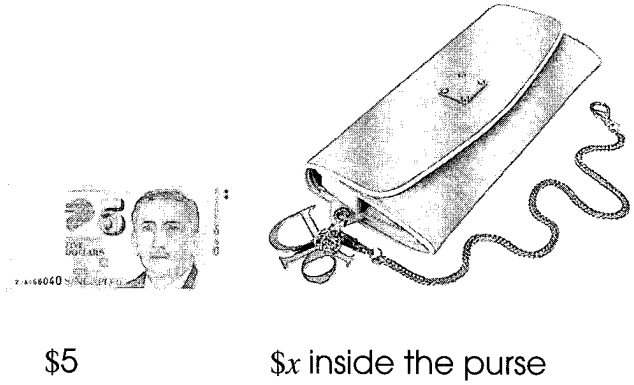

(c) The length of each side of an equilateral triangle is $m$ cm. What is its perimeter?



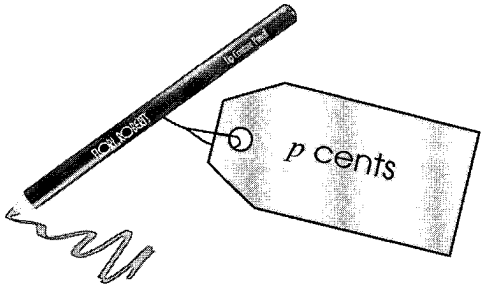
(d) John is 120 cm tall and Peter is $h$ cm tall. What is the difference in their height?




(e) Mrs Lim is holding a \$5 note. She has \$$x$ inside her purse. How much money does she have altogether?




(f) One pencil costs $p$ cents. What is the cost of 5 pencils?



**4.** Kee Jin is $y$ years old. Form algebraic expressions in terms of $y$ for the following situations.

(a) In 3 years time, how old will Kee Jin be?

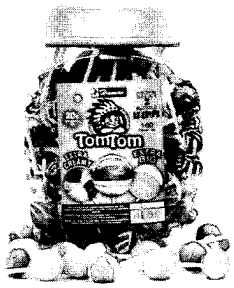
(b) How old was Kee Jin 4 years ago?

(c) John is twice as old as Kee Jin. How old is John?

(d) Kee Jin is 3 years older than his sister. How old is his sister?

**5.** A bottle contains $x$ sweets. 5 sweets are given away.
Form algebraic expressions for the following situations in terms of $x$.

(a) What is the number of sweets remaining in the bottle?




(b) The remaining sweets in the bottle is then given equally to 3 persons. How many sweets will each person get?

**6.** There are $p$ sheets of paper. Each piece of paper is cut into 2 pieces. How many pieces of paper are there altogether?

**7.** Mrs Raju has 3 trays of eggs. Each tray has $x$ eggs. She uses 4 eggs for cooking. How many eggs are left now?

**WORKSHEET 2**

Date:

# Simplification and Evaluation of Algebraic Expressions

**1.** Simplify the following algebraic expressions.

| | |
|---|---|
| (a) $x + x + x + x + x + x$ | (b) $3m + 3m + 3m$ |
| (c) $4k + k$ | (d) $3n + 3n + 4n$ |
| (e) $2y - y$ | (f) $5x - 3x$ |
| (g) $z + 3z - 2z$ | (h) $6h - 4h + 3h$ |

**2.** Simplify the following algebraic expressions.

(a) $4x + 5 + 2x + 6$

(b) $6p + 8 + 3p - 4$

(c) $5k + 1 - 2k + 7$

(d) $7b + 9 - 6b - 2$

**3.** Find the value of each algebraic expression by substituting the given value for the unknown.

| | |
|---|---|
| (a) $5x$ when $x = 3$ | (b) $4x + 1$ when $x = 2$ |
| (c) $2h - 6$ when $h = 7$ | (d) $\frac{4y}{3}$ when $y = 2$ |

(e) $\frac{4 + 3x}{2}$ when $x = 4$

(f) $\frac{2c}{3} + 1$ when $c = 6$

(g) $6 - \frac{3d}{2}$ when $d = 4$

(h) $\frac{13 - 2e}{3}$ when $e = 5$

# WORKSHEET 3

Date: _____

## Word Problems

**1.** Liza has $\$m$ in her savings. Muni's savings is \$10 more than Liza's.

(a) Find in terms of $m$,

(i) Muni's savings and

(ii) the combined savings of Liza and Muni.

(b) If Liza's savings is \$65, what is their combined savings?

**2.** An odd number can be represented by $2n + 1$ where $n$ is any whole number. George is thinking of an odd number with $n = 50$. What is the odd number that he is thinking of?

**3.** Building A in a housing estate has $x$ units. Building B has 2 times as many units as Building A.

(a) Find in terms of $x$, the total number of units in these two buildings.

(b) If Building A has 36 housing units, what is the total number of units in the two buildings?

**4.** The number of girls in Class 6A is $y$. The number of boys in the same class is 1 more than the girls.

(a) Find the total number of pupils in Class 6A in terms of $y$.

(b) If the number of girls in the class is 14, what is the total number of pupils in Class 6A?

**5.** Rosli is $y$ years old. His brother Ramli is 3 years younger than him.

(a) Express their total age in terms of $y$.

(b) If Rosli is 12 years old, how old is Ramli?

**6.** The length of a rectangle is 3 times its breadth. The breadth is $x$ cm.

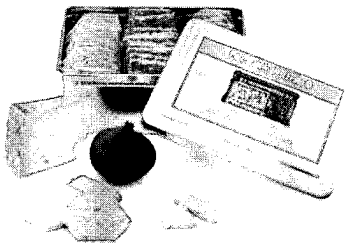
(a) What is the perimeter of the rectangle in terms of $x$?

(b) If the breadth is 4 cm, find the perimeter of the rectangle.

**7.** A tin of biscuits cost $\$p$. A box of chocolates cost twice as much as the tin of biscuits. Lingam bought 1 tin of biscuits and 1 box of chocolates.

(a) Find the total amount of money Lingam spent in terms of $p$.

(b) If the cost of 1 tin of biscuits was \$5, what was the total amount of money Lingam spent?



**8.** There were two boxes of oranges each containing $n$ oranges. In total, 7 oranges were rotten.

(a) Find the number of remaining good oranges in terms of $n$.

(b) If one box contained 30 oranges, how many good oranges were there?

**9.** John had $x$ marbles. He kept 20 marbles and distributed the rest equally to 4 friends.

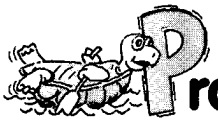
(a) Express the number of marbles each of his friends got in terms of $x$.

(b) If John had 76 marbles originally, how many marbles did each of his friends get from him?

**10.** The lengths of the sides of a triangle are $(n + 5)$ cm, $(n + 2)$ cm and $(n + 3)$ cm.

(a) Find the perimeter of the triangle in terms of $n$.

(b) If $n = 45$, find the perimeter of the triangle.



# Practice 1

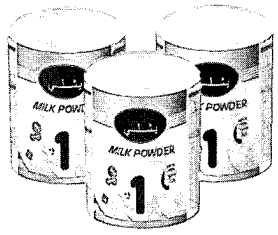
Date:

**1.** Write an algebraic expression for each of the following.

| | |
|---|---|
| (a) The sum of $x$ and $\frac{1}{2}$ | |
| (b) 5 times of $y$ | |
| (c) One third of $y$ | |
| (d) The sum of $\frac{n}{6}$ and 2 | |
| (e) The difference of $2x$ and 1 | |
| (f) Subtract 2 from $x$. Then divide the difference by 3. | |

**2.** Write an algebraic expression for each of the following.

(a) A tin of milk powder cost $x$ dollars. A man bought 3 tins of such milk powder and paid with a \$100 note. How much change did he receive?




(b) A box has $n$ oranges. 7 oranges are rotten and removed. The remaining oranges are packed equally into 5 bags. How many oranges are there in each bag?

(c) Joe has $x$ dollars. He has 2 times as much as Peter. Mary has \$20 more than Peter. How much does Mary have?

**3.** Simplify the following algebraic expressions.

| | |
|---|---|
| (a) $2x + 4x + x$ | (b) $4y + 5y + 3 - 2y$ |
| (c) $3n - 2 + 6n$ | (d) $8m + 3 - 4m - 2$ |
| (e) $6f + 6 - f + 1 + 2f - 5$ | (f) $7k + 4k + 3 - 8k + 6$ |

**4.** Find the value of each algebraic expressions by substituting the given value for the unknown.

| | |
|---|---|
| (a) $3k + 8$ when $k = 14$ | (b) $6n - 4$ when $n = 15$ |
| (c) $\frac{x}{3} + 8$ when $x = 81$ | (d) $\frac{y}{4} - 3$ when $y = 84$ |
| (e) $\frac{4p + 1}{5}$ when $p = 21$ | (f) $\frac{3q - 2}{4}$ when $q = 18$ |

**5.** Rosli has $m$ story books. Siva has twice as many story books as Rosli. Jen has 7 story books less than Siva.

(a) Find the total number of story books that Siva and Jen have in terms of $m$.

(b) If Rosli has 12 story books, find the total number of story books that Siva and Jen have.

**6.** Last week, Irene had $n$ dollars in her savings account and Jimmy had 3 times as much in his savings account. This week, Irene deposited \$100 in her account, and Jimmy deposited \$40 in his account.

(a) Find the total amount in their savings accounts this week in terms of $n$.

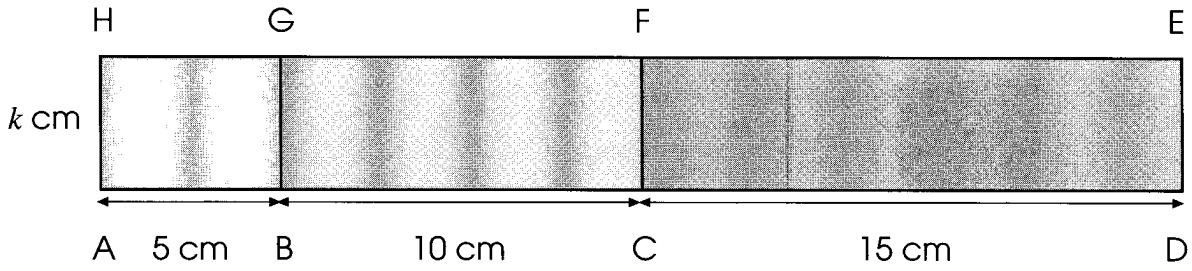
(b) If $n = 350$, find their total savings in their accounts this week.

**7.** A fish tank had $k$ goldfish. Three goldfish died and were removed. The remaining goldfish were put equally into two containers.

(a) Find the number of fish in each container in terms of $k$.

(b) If the fish tank had 21 goldfish originally, how many goldfish were there in each container?

**9.** Find the area of rectangle ADEH as shown below.



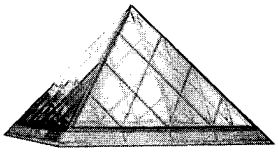
# 2 Solid Figures

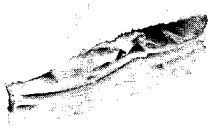
## WORKSheet 4

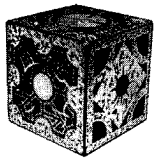
Date:

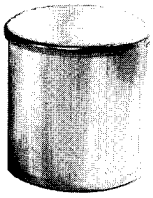
## Drawings of Solid Figures

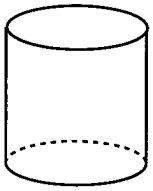
**1.** Match each solid to its drawing with a line.

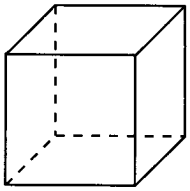


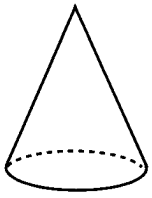


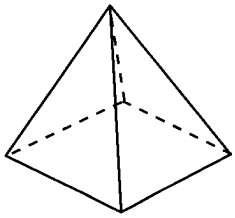


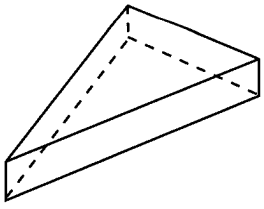






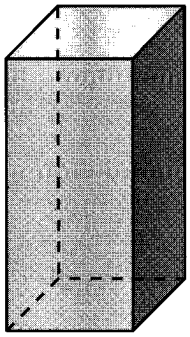






**2.** Is each solid, represented by a drawing below, a cube, cuboid or a prism? State "Yes" or " No".

(a)



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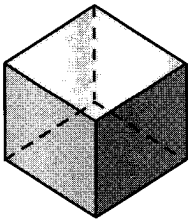

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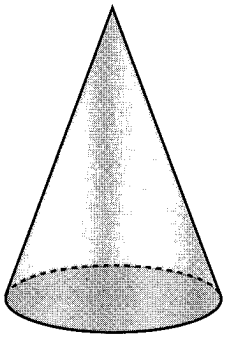
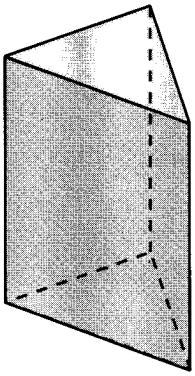
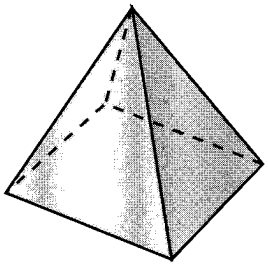


(d)



(e)



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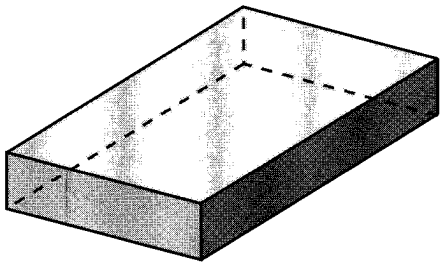
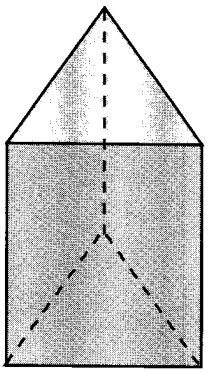
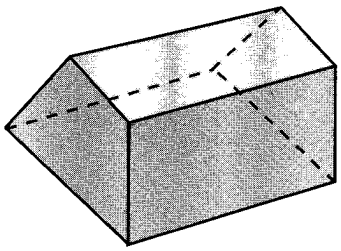


**3.** Is each solid, represented by a drawing below, a pyramid?
State "Yes" or " No".

(a)



(b)



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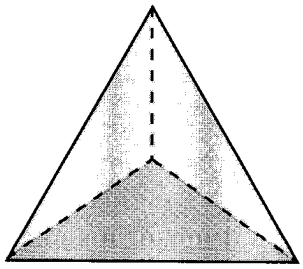

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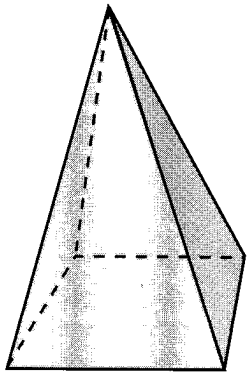

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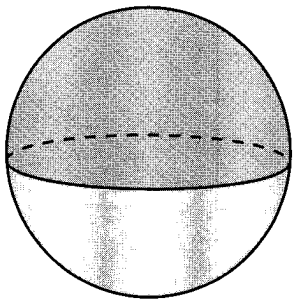

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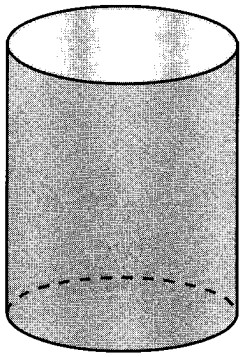


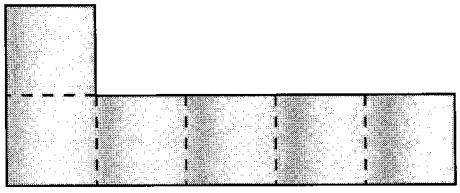
**WORKSHEET 5**

Date: _____

# Nets of Cubes, Nets of Cuboids and Nets of Prisms

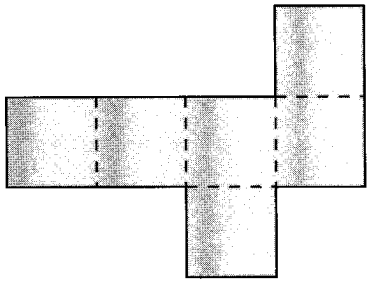
**1.** Determine which one of the following drawings is a net of a cube. Circle "Yes" if it is and "No" if it is not.

(a)



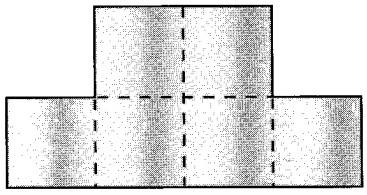
Yes / No

(b)



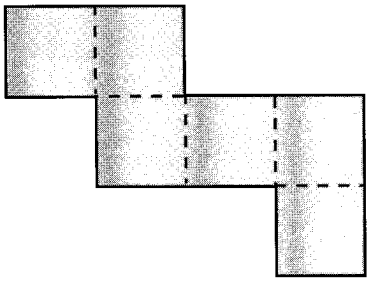
Yes / No

(c)



Yes / No

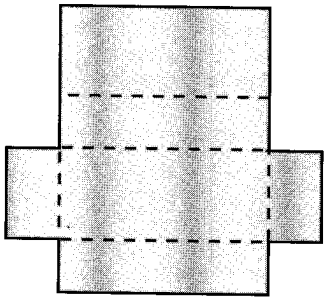
(d)



Yes / No

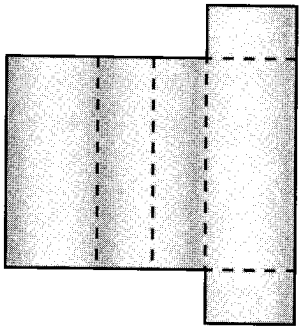
**2.** Are these drawings nets of cuboids? Circle "Yes" if it is and "No" if it is not.

(a)



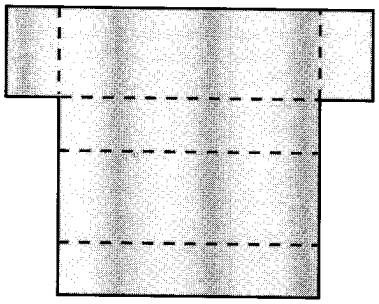
Yes / No

(b)



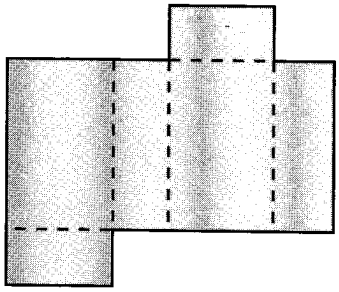
Yes / No

(c)



Yes / No

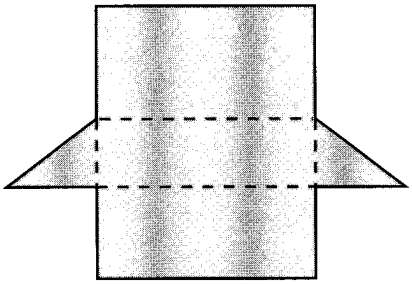
(d)



Yes / No

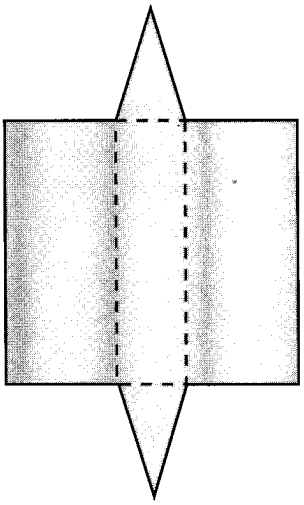
**3.** Put a tick (✔) in the box for the net of a prism.

(a)



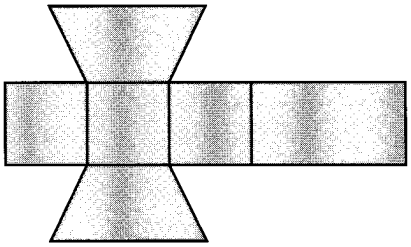
☐

(b)



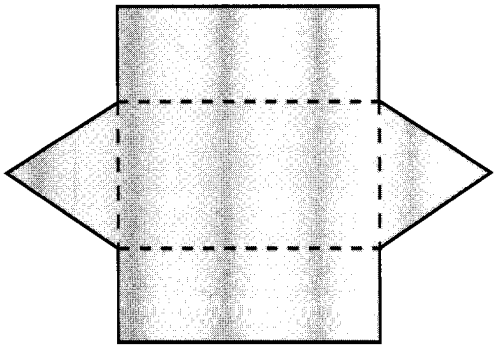
☐

(c)



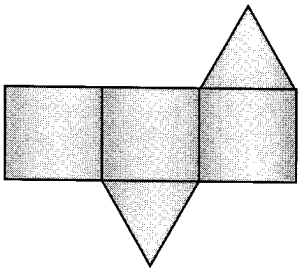
☐

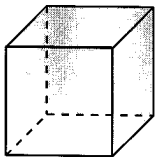
(d)

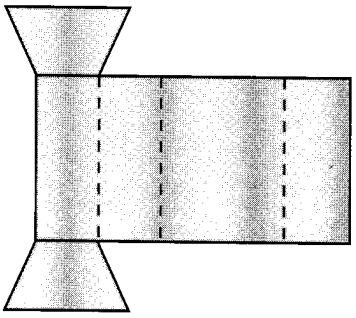


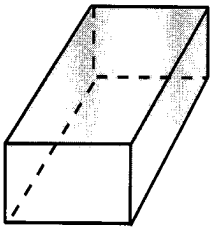
☐

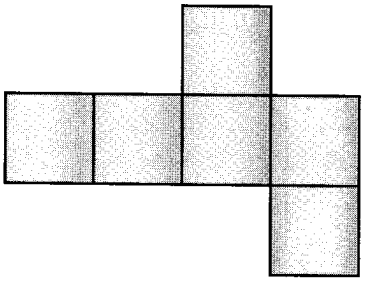
**4.** Match each solid to its net with a line.

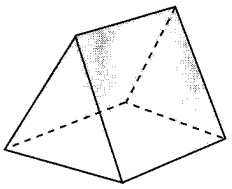


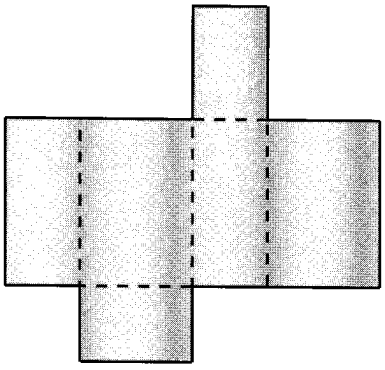


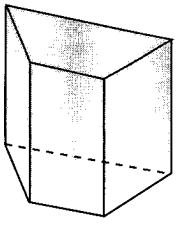












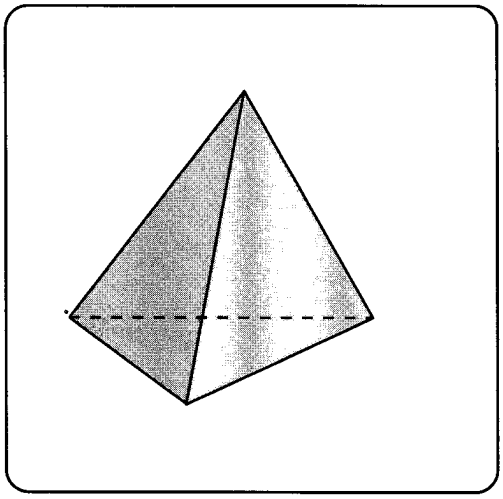
# WORKSheet 6

Date:

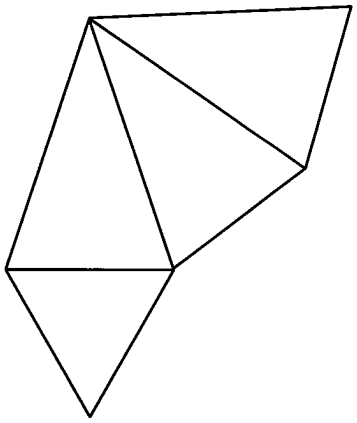
## Nets of Pyramids

**1.** In each case, put a cross in the figures which cannot form the pyramid shown in the box.

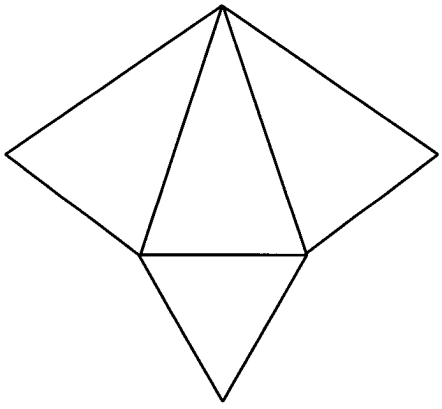
(a)



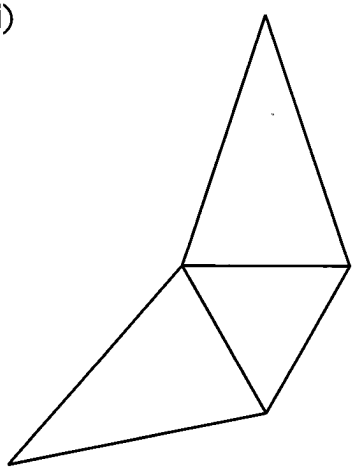
(i)



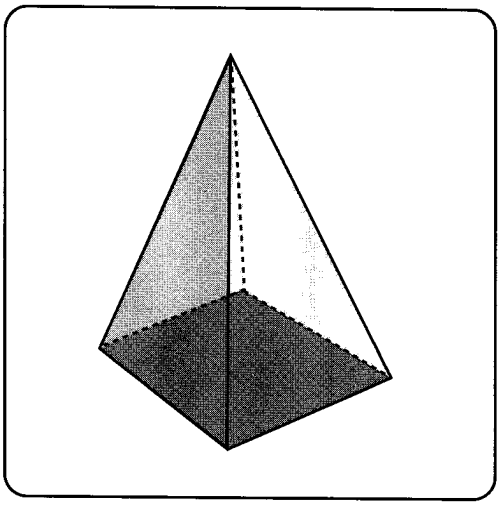
(ii)



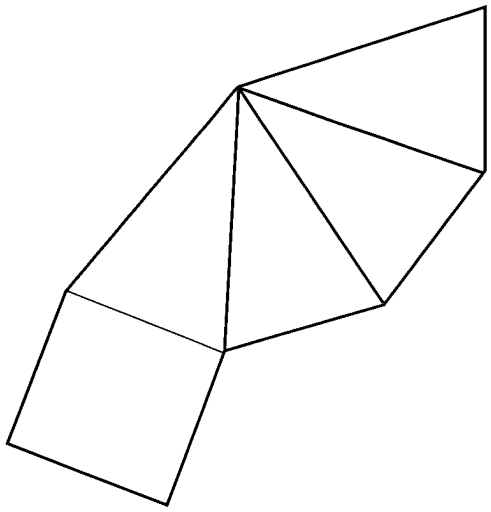
(iii)



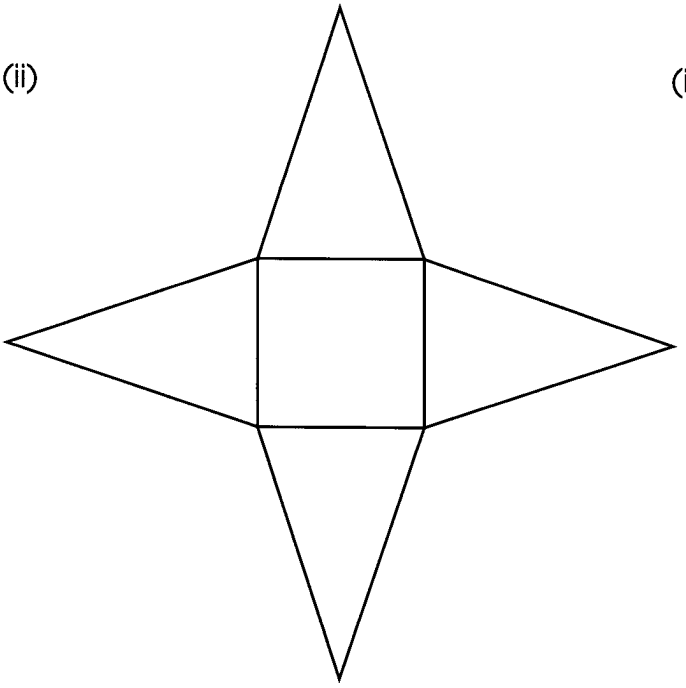
(b)



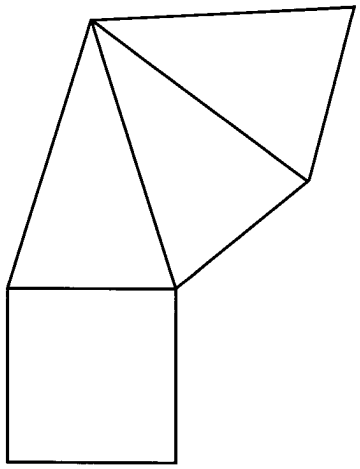
(i)



(ii)



(iii)

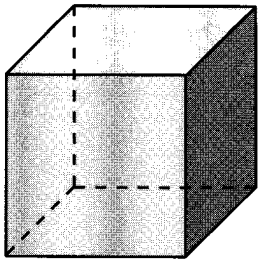


# Practice 2

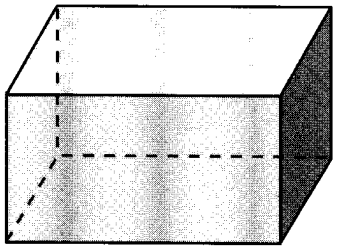
Date:

**1.** Classify the solids that are represented by the drawings in the table below.

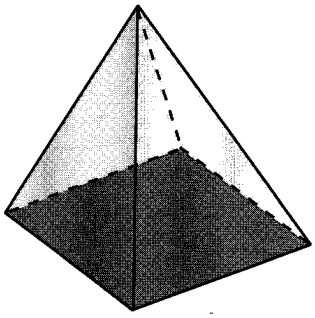
(a)



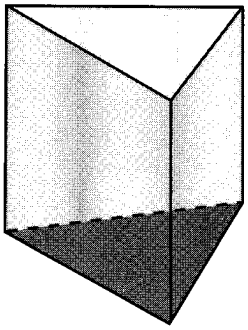
(b)



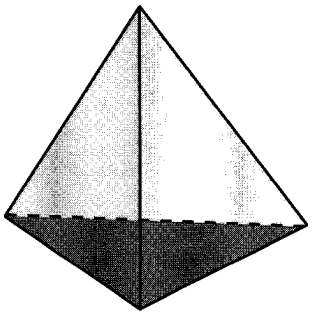
(c)



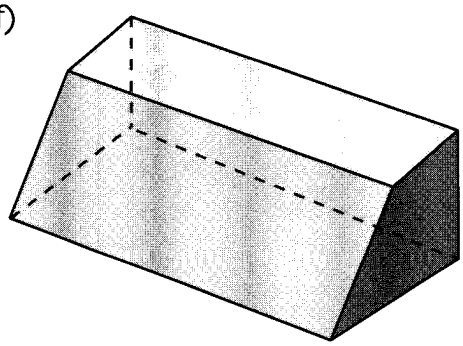
(d)



(e)

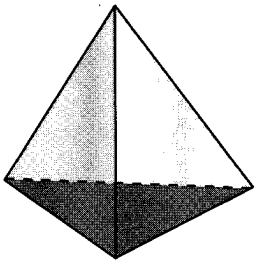


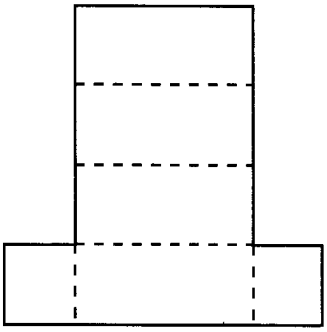
(f)

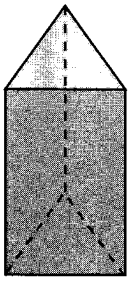


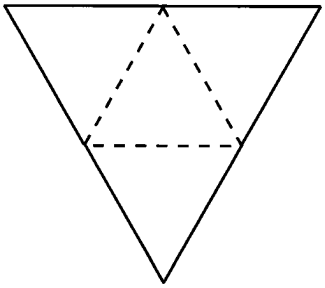
| | |
|---|---|
| Cube, Cuboid | |
| Prism | |
| Pyramid | |

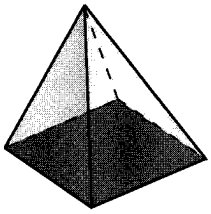
**2.** Match each solid to its net.

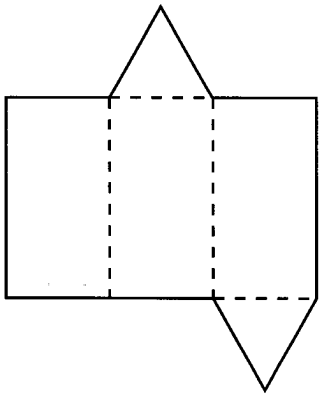


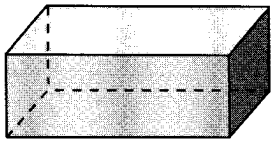


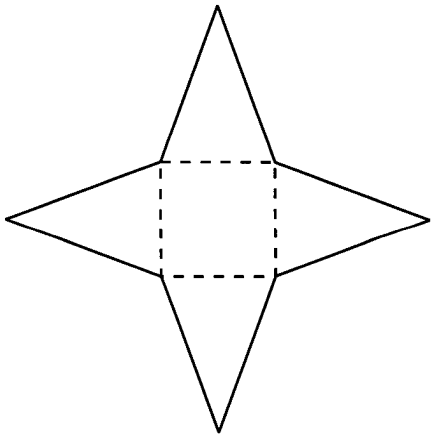






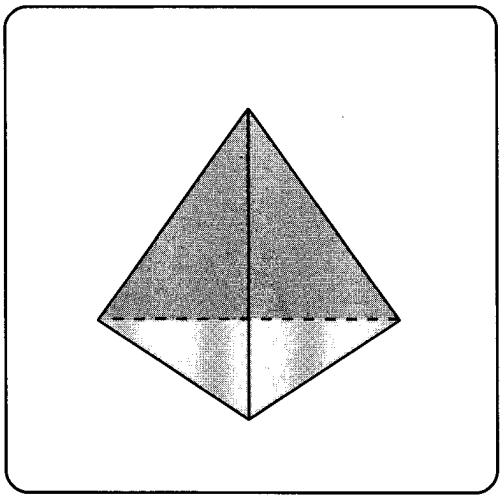


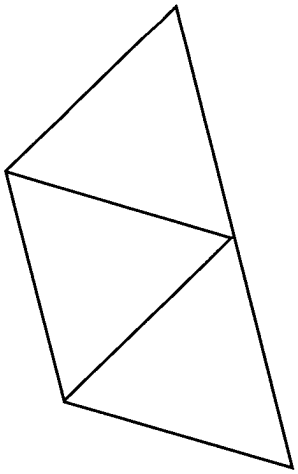




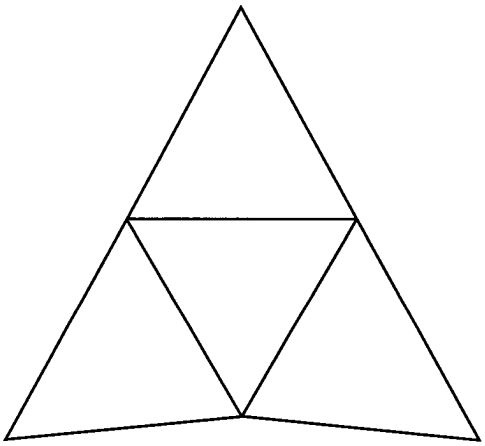
**3.** In each case, tick the net of the solid given in the box.

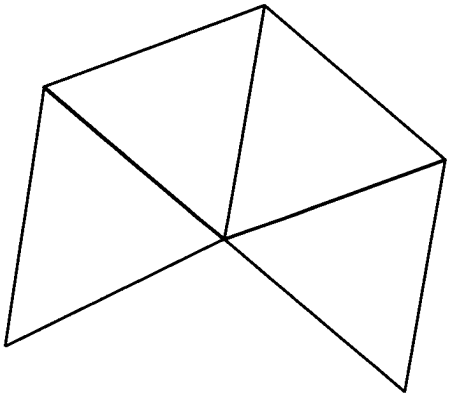
(a)





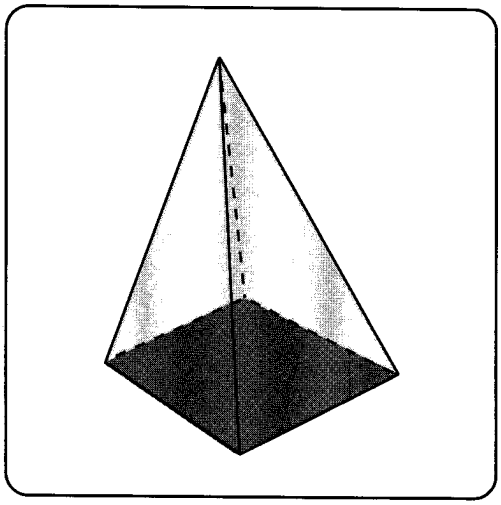
☐

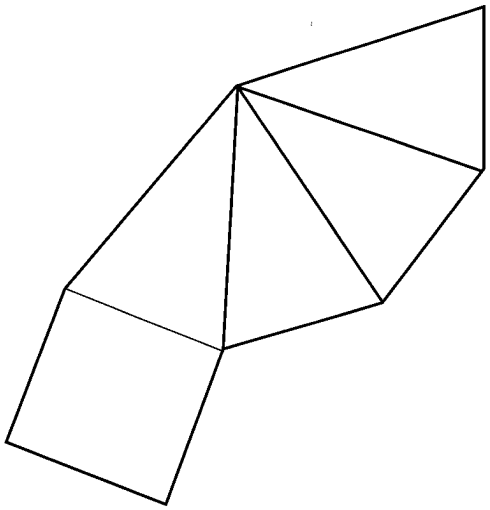


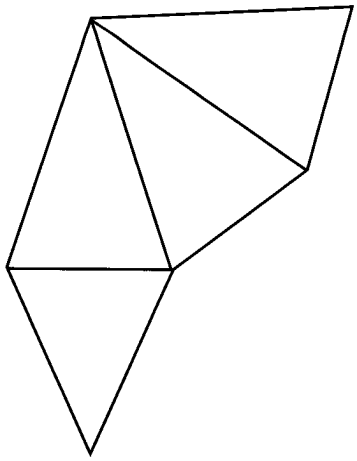


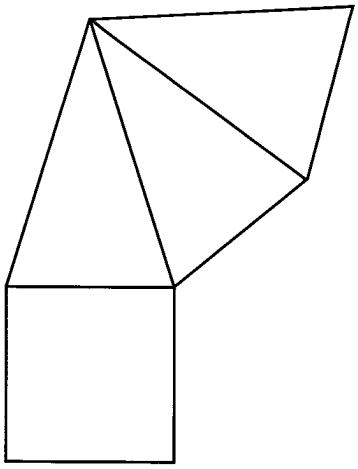
☐ ☐

(b)

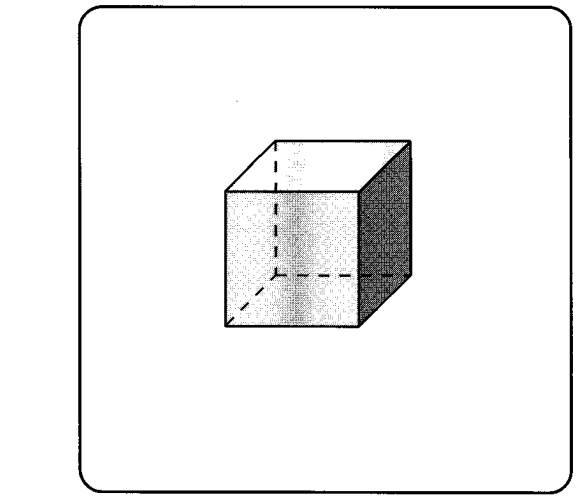


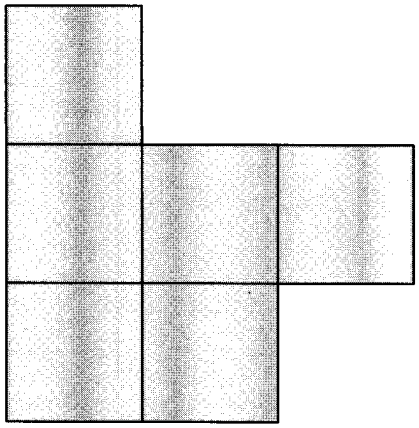


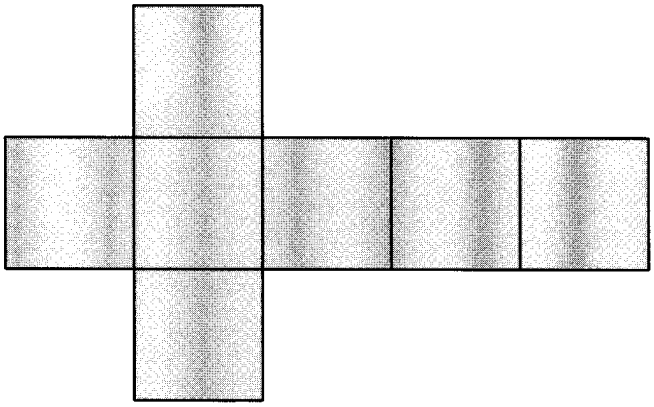


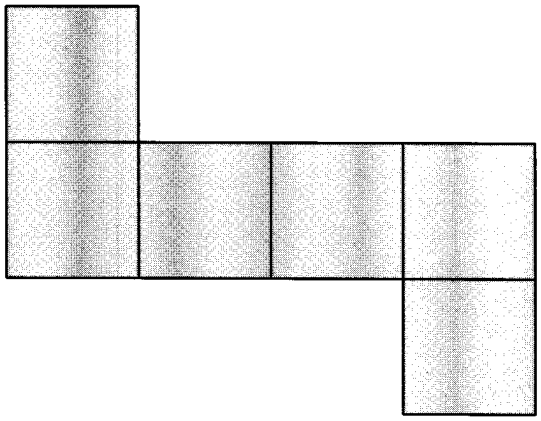


(c)

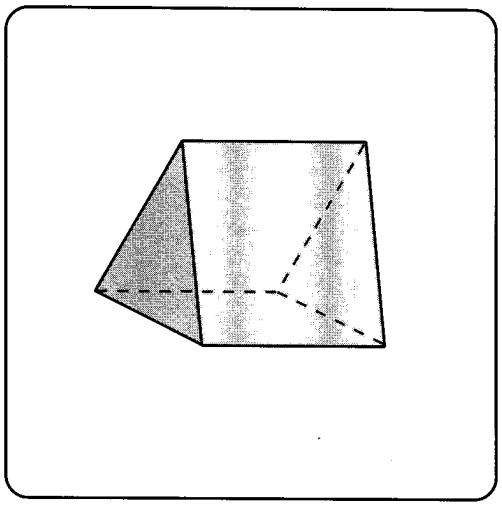


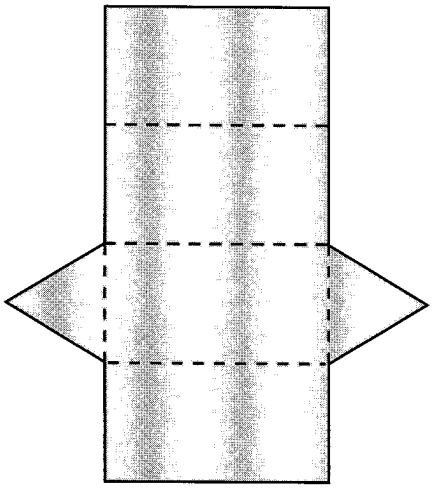


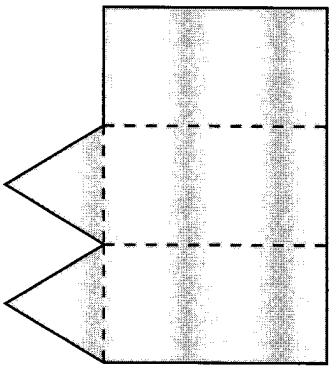


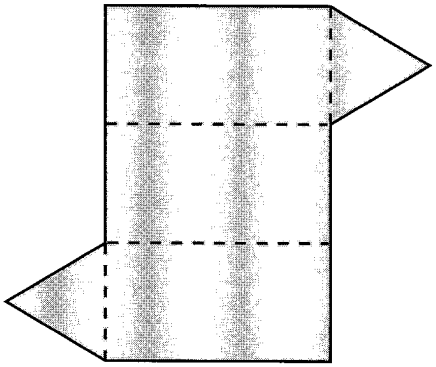


(d)









# 3 Ratio

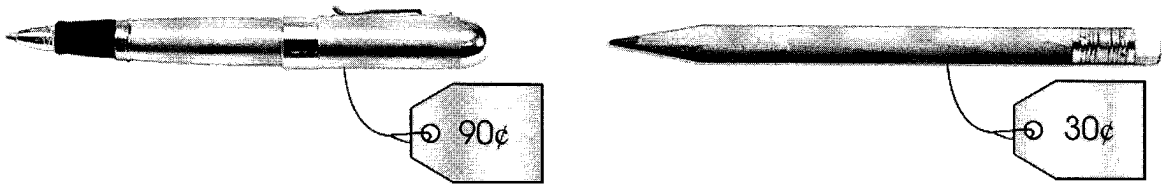
## WORKSHEET 7

Date: ☐

## Comparing Two Quantities

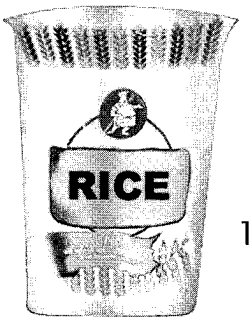
**1.** Fill in the boxes.

(a)




The pen costs ☐ times as much as the pencil. The price of the pencil is ☐ of the price of the pen.

(b)

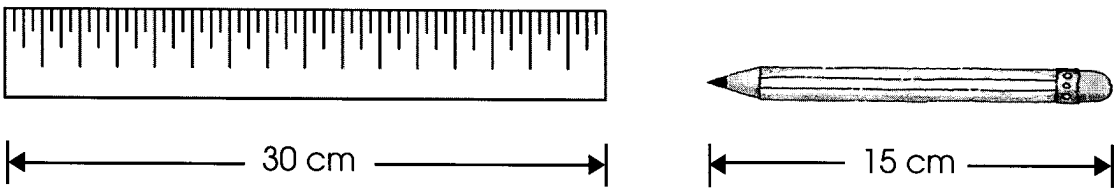



10 kg


2 kg

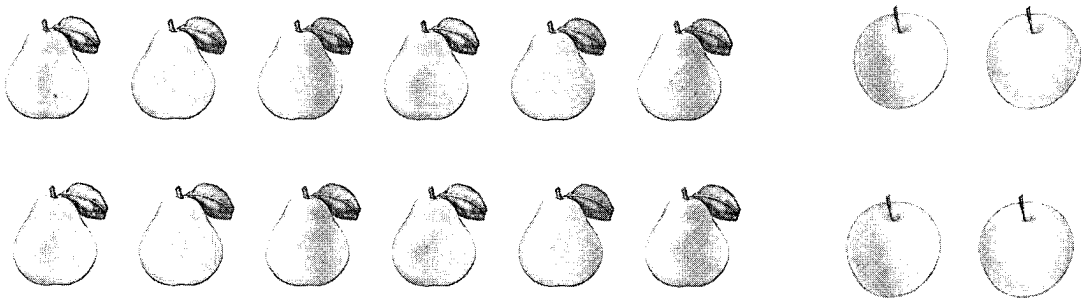
The mass of the bag of rice is ☐ times as much as the mass of the packet of flour. The mass of the packet of flour is ☐ of the mass of the bag of rice.

(c)



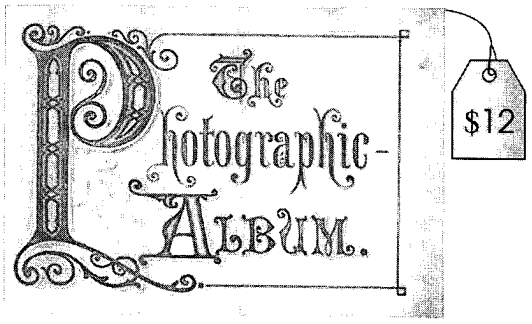

The ruler is ☐ times as long as the pencil. The length of the pencil is ☐ of the length of the ruler.

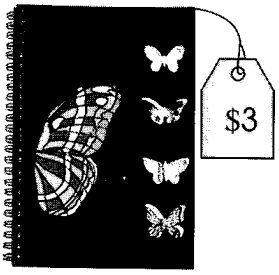
(d)



The number of pears is ☐ times as many as apples. The number of apples is ☐ of the number of pears.

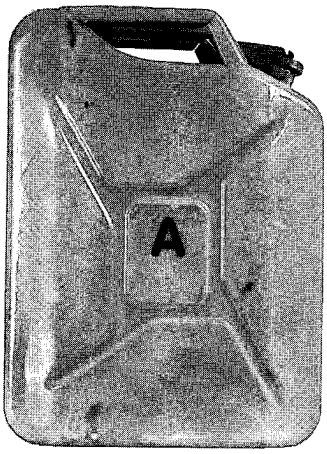
(e)




The album costs ☐ times as much as the notebook. The price of the notebook is ☐ of the price of the album.

(f)




2400 ml


400 ml

The capacity of container A is ☐ times as much as container B.

The capacity of container B is ☐ of the capacity of container A.

**2.** There are 18 boys and 6 girls in a class.

(a) How many times are there as many boys as girls in the class?

(b) What fraction of the number of boys is the number of girls?

**3.** The mass of Peter is 35 kg and the mass of his brother is 7 kg.

(a) How many times is Peter's mass as much as his brother's mass?

(b) What fraction of Peter's mass is his brother's mass?

**4.** The length of String A is 26 m. The length of String B is 24 m. Express the length of String B as a fraction of the length of String A.

# WORKSHEET 8

Date: _____

## Ratio and Fraction

**1.** Write the given ratios as fractions.

| | Ratio | Fraction |
|---|---|---|
| (a) | 1 : 2 | |
| (b) | 3 : 7 | |
| (c) | 5 : 4 | |
| (d) | 10 : 3 | |

**2.** Write the given fractions as ratios.

| | Fraction | Ratio |
|---|---|---|
| (a) | $\frac{1}{3}$ | |
| (b) | $\frac{2}{5}$ | |
| (c) | $\frac{4}{3}$ | |
| (d) | $\frac{7}{6}$ | |

**3.** Express each of the following comparisons as ratio in its simplest form.

(a) 10 cm to 15 cm

(b) 25 min to 1h

(c) 2 kg to 500 g

(d) \$0.70 to \$2.10

(e) 20 years old to 12 years old

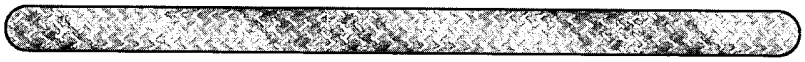
**4.** There are 6 glasses of mango juice and 9 glasses of orange juice. Find the following ratios and fractions in the simplest form:

(a) The ratio of the number of glasses of mango juice to the number of glasses of orange juice is _____ .

(b) The number of glasses of mango juice is $\frac{\square}{\square}$ of the number of glasses of orange juice.

(c) The number of glasses of orange juice is $\frac{\square}{\square}$ of the number of glasses of mango juice.

**5.**



Rope A

5 m

Rope B

3 m

(a) The ratio of the length of Rope A to the length of Rope B is _____ .

(b) The ratio of the length of Rope B to the length of Rope A is _____ .

(c) The length of Rope A is $\frac{\square}{\square}$ of the length of Rope B.

(d) The length of Rope B is $\frac{\square}{\square}$ of Rope A.

**6.** Ramli has $300 in his savings account. Ricky has $400 in his savings account. Express each of the answers in its simplest form.

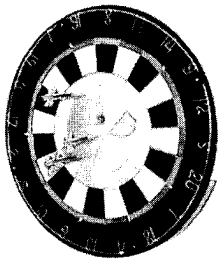
(a) What is the ratio of Ramli's savings to Ricky's savings?

(b) What is the ratio of Ricky's savings to Ramli's savings?

(c) What fraction of Ramli's savings is Ricky's savings?

(d) What fraction of Ricky's savings is Ramli's savings?

**7.** The marks scored by 3 pupils in a game are shown in the table below. (Express the answer in its simplest form.)



| Name | Mark |
|---|---|
| Rohani | 90 |
| Susy | 85 |
| Ming | 45 |

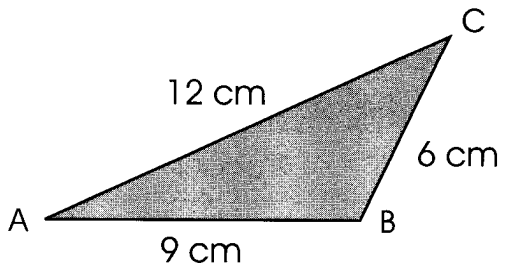
(a) What is the ratio of Rohani's marks to Ming's marks?

(b) What fraction of Rohani's marks is Susy's marks?

(c) How many times is Rohani's marks as many as Ming's marks?

(d) What is the ratio of Rohani's marks to Susy's marks to Ming's marks?

**8.** The length of sides of the triangle ABC is shown below.




Express the ratio or fraction in its simplest form.

(a) What is the ratio of AB to AC?

(b) How many times is AC as long as BC?

(c) What is the ratio of AB to BC to AC?

(d) What is the ratio of AC to the perimeter of the triangle?

(e) What fraction of the perimeter of the triangle ABC is BC?

# WORKSHEET 9

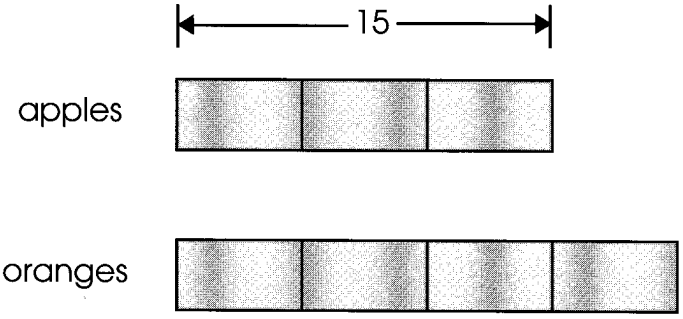
Date:

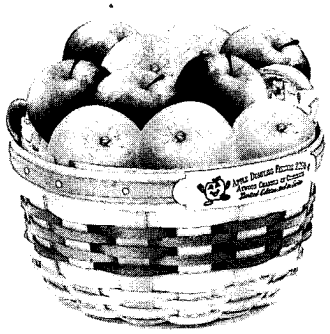
## Part and Whole

**1.** In a basket, the ratio of the number of the apples to the number of oranges is 3 : 4. There are 15 apples in the basket.

(a) How many oranges are there in the basket?

(b) How many apples and oranges are there altogether in the basket?



**2.** In a farm, the ratio of the number of hens to the number of ducks is 3 : 5. There are 125 ducks in the farm.
(a) How many hens are there in the farm?
(b) How many hens and ducks are there altogether?

**3.** Ms Tan and Ms Lee shared a bag of rice in the ratio 4 : 5. Ms Tan received 16 kg of the rice. What was the mass of the bag of rice that was shared?

**4.** Mary and Osman shared 240 stamps in the ratio 4 : 2. How many stamps did Osman get?

**5.** A piece of land of area 320 $m^2$ is divided into two parts in the ratio 4 : 6. What is the area of each part?

**6.**  A primary school has 1560 pupils. The ratio of the number of the girls to the number of boys is 11 : 13. How many girls are there in the school?

**7.**  A rope of 230 cm long is cut into two parts in the ratio 6 : 7. What is the length of each part? Give your answer correct to the nearest cm.

**8.** The ratio of the number of men to the number of women to the number of children in a theatre is 3 : 5 : 2. There are 69 men in the theatre.

(a) How many women are there in the theatre?

(b) How many children are there in the theatre?

(c) How many people are there altogether in the theatre?

(d) How many more women than men are there in the theatre?

**9.** The ratio of Jane's savings to Peter's savings to Mary's savings is 6 : 7 : 5. Given that Peter's savings is $98, how much is the total savings of the three children?

**10.** A rope is cut into 3 parts in the ratio 3 : 4 : 6. The length of the shortest part is 54 cm.

(a) What is the length of the longest part?

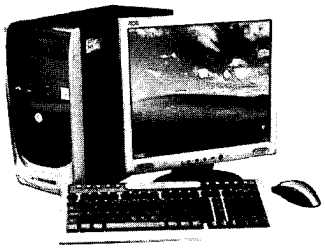
(b) What is the length of the original rope?

**11.** Peter has a total of 108 red, blue and yellow marbles. The ratio of the number of red marbles to the number of blue marbles to the number of yellow marbles is 2 : 3 : 4.

(a) How many blue marbles does Peter have?

(b) How many more yellow marbles than red marbles does Peter have?

**12.** Mr Teh spent $2850 on a computer, a printer and a TV set. The ratio of the price of the computer to the price of the printer to the price of the TV set is 10 : 2 : 7. What is the price of the computer?



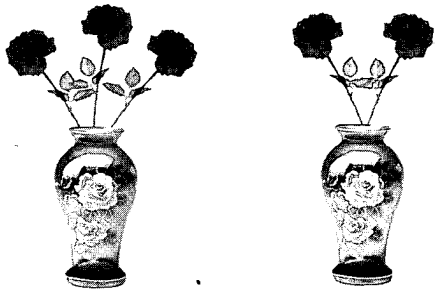
# WORKSHEET 10

Date:

## Word Problems

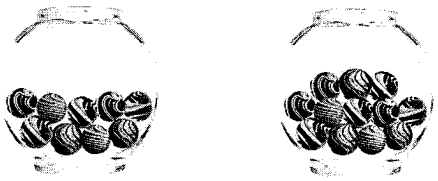
1. The ratio of the number of flats in Building A to the number of flats in Building B is 5 : 3. The ratio of the number of flats in Building B to the number of flats in Building C is 1 : 2.
   (a) Find the ratio of the number of flats in Building A to the number of flats in Building B to the number of flats in Building C.
   (b) If the number of flats in Building A is 30, find the total number of flats in Building B and Building C.

**2.** There are 3 flowers in Vase A and 2 flowers in Vase B. 6 more flowers are added to vase A. How many flowers must be added to Vase B so that the ratio of the number of flowers in Vase A to the number of flowers in Vase B remains the same as before?



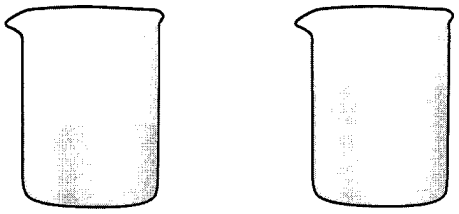
A B

**3.** Bowl P has 9 marbles and Bowl Q has 12 marbles. 3 marbles are removed from Bowl P. How many marbles should be removed from Bowl Q so that the number of marbles in Bowl P to the number of marbles in Bowl Q remains the same as before?



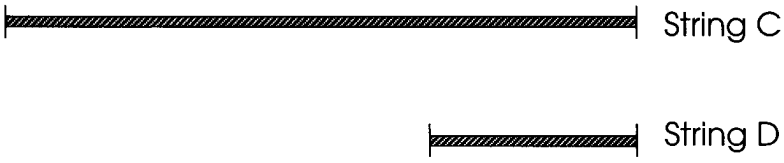
Bowl P Bowl Q

**4.** The ratio of the volume of water in Glass A to the volume of water in Glass B is 2 : 3 at first. 200 ml of water is added to Glass A. How much water must be added to Glass B so that the ratio of the volume of water in Glass A to the volume of water in Glass B remains the same as before?



Glass A Glass B

**5.** The ratio of the length of String C to the length of String D is 3 : 1. A length of 6 cm is cut off from String C. What length must be cut off from String D so that the ratio of the length of String C to the length of String D remains the same as before?



**6.** The ratio of the number of boys to the number of girls in a class was 2 : 3 at first. After 4 girls left the class, the ratio became 4 : 5. How many boys were there in the class?

**7.** The ratio of the number of stamps Mary had to the number of stamps John had was 3 : 7. After John gave 6 stamps to Mary, the ratio became 4 : 6. How many stamps did John have at first?

**8.** The ratio of the number of cards John had to the number of cards Peter had was 5 : 6. After Peter gave $\frac{1}{3}$ of his cards to John, John had 42 cards. How many cards did John have at first?

**9.** The ratio of the amount of money Ali had to the amount of money Jane had was 3 : 7 at first. After Ali gave $\frac{1}{3}$ of his money to Jane, what was the ratio of the amount of money Ali had to the amount of money Jane had?

# Practice 3

Date: _____

**1.** Write each fraction as a ratio.

| Fraction | Ratio |
|---|---|
| $\frac{2}{5}$ | |
| $\frac{1}{3}$ | |
| $\frac{5}{6}$ | |
| $\frac{3}{7}$ | |
| $\frac{6}{5}$ | |

**2.** Fill in the blanks.

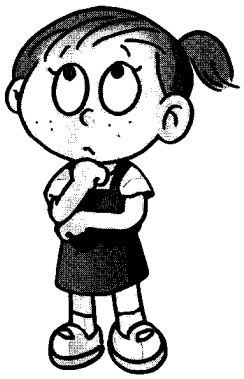
The mass of Mr Tan is 3 times the mass of John.

The ratio of the mass of Mr Tan to the mass of John is _____.

The ratio of the mass of John to the mass of Mr Tan is _____.

**3.** Write each ratio as a fraction.

| Ratio | Fraction |
|---|---|
| 1 : 4 | |
| 2 : 3 | |
| 5 : 6 | |
| 8 : 3 | |
| 7 : 2 | |



**4.** Fill in the blanks.

The ratio of Jane's savings to Peter's savings is 3 : 1.

Jane's savings is ☐ times as much as Peter's savings.

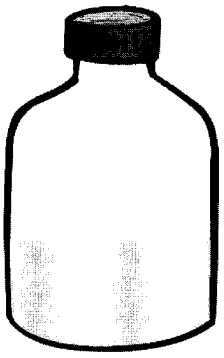
Peter's savings is $\frac{\square}{\square}$ of Jane's savings.

**5.**

400 ml

Bottle A

600 ml



Bottle B

(a) Find the ratio of the volume of liquid in Bottle A to the volume of liquid in Bottle B. Express your answer in the simplest form.

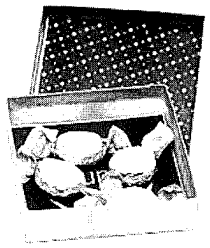
(b) What fraction of the volume of liquid in Bottle B is the volume of liquid in Bottle A?

(c) If 200 ml of liquid is poured out from Bottle A, how much liquid must be poured out from Bottle B so that the ratio of the volume of liquid in Bottle A to the volume of liquid in Bottle B remains the same as before?

**6.** A bag of sweets is divided in the ratio 3 : 5 and put into two boxes. The box with less sweets contains 15 sweets. Find

(a) the total number of sweets in the bag at first,

(b) the number of sweets in the box with more sweets.



**7.** A piece of rope is cut into 2 parts in the ratio of 3 : 5. The longer part is 16 cm longer than the shorter part. Find

(a) the length of the original rope,

(b) the length of the longer part.

8. Harif and his brother, Ariffin agreed to buy a bicycle by sharing out the cost. The ratio of the amount of money paid by Harif to that paid by Ariffin was 5 : 2. The bicycle cost $140. Find the amount paid by each of them.

9. Some chairs in a class are arranged in 3 rows. The ratio of the number of chairs in the first row to the number of chairs in the second row to the number of chairs in the third row is 3 : 4 : 5. The second row has 20 chairs. Find
   (a) the total number of chairs in the class,
   (b) the number of chairs in the first row.

**10.** Mary, Sufen and Devi shared some cards in the ratio 4 : 3 : 6. Devi received 14 more cards than Mary. How many cards did Sufen receive?

**11.** $\frac{1}{3}$ of the people in a theatre are men. The ratio of the number of women to the number of children in the theatre is 3 : 4. There are 168 children in the theatre. How many men are there?

**12.**  The ratio of the number of pupils in School A to the number of pupils in School B is 4 : 5. The ratio of the number of pupils in School B to the number of pupils in School C is 6 : 7. There are 2100 pupils in School C. How many pupils are there in School A?

**13.** Ali had $120 and his sister had $70. After their mother gave each of them an equal amount of money, the ratio of the amount of money Ali had to the amount of money that his sister had was 5 : 3. How much money did their mother give each of them?

# Revision 1A

Date:

**1.** Write an algebraic expression for each of the following.

(a) 5 is subtracted from $x$.

(b) 5 is added to $3x$.

(c) $3y$ is added to 4.

(d) 3 is subtracted from $4y$.

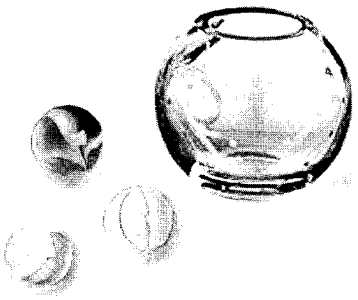
(e) Add $p$ and 6. Then divide the sum by 5.

(f) Subtract 11 from $q$. Then divide the difference by 3.

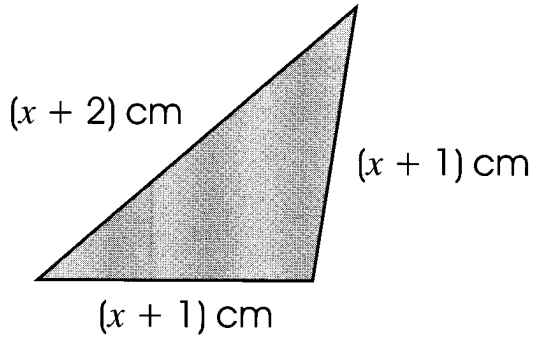
(g) Multiple $x$ by $\frac{1}{4}$. Then add 7 to the product.

**2.** Form an algebraic expression in terms of $x$ for each case.

(a) The mass of a marble is $x$ g. The mass of a bowl is 150 g. What is the total mass of 34 such marbles and 1 such bowl?



(b) The lengths of the three sides of a triangle are shown below. What is the perimeter of the triangle?

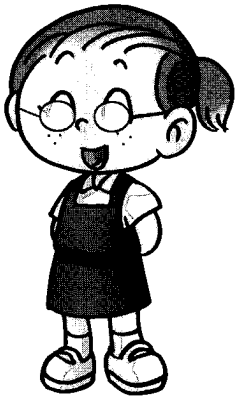



(c) Stick A is $x$ m long. Stick B is longer than Stick A by 1 m. What is the sum of the lengths of Stick A and Stick B?

**3.** The number of girls in Class 6C is $y$. The number of boys in class 6C is 17. Write down an algebraic expression in terms of $y$ for each of the following.

(a) What is the total number of pupils in Class 6C?

(b) 3 of the girls in Class 6C wear glasses. What is the number of girls who do not wear glasses?



(c) 7 girls and 5 boys in the class come to school by bus. What is the number of pupils who do not come to school by bus?

**4.** Simplify:

(a) $p + p + p + p + p$

(b) $3m + 5m - 4m$

(c) $2x - x + 3x - 2x$

(d) $3y + 2y + y - 5y$

**5.** Simplify:

(a) $x + 7 + 3x + 4$

(b) $2n + 9 + n - 6$

(c) $8b + 1 - 5b + 9$

(d) $6c + 8 - 4c - 5$

**6.** Find the value of the following algebraic expressions.

(a) $5x - 3$ when $x = 2$

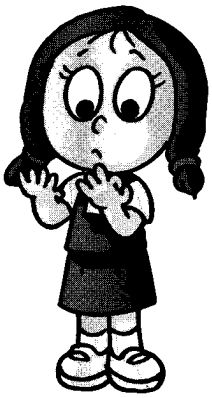
(b) $4y - 5$ when $y = 3$

(c) $\frac{2k - 7}{3}$ when $k = 6$

(d) $\frac{3d}{2} + 2$ when $d = 12$

(e) $\frac{5p + 2}{6}$ when $p = 23$

**7.** Rosni spent $x$ cents on Monday. On Tuesday, she spent 30 cents more than on Monday.



(a) Find in terms of $x$,

(i) the amount of money Rosni spent on Tuesday,

(ii) the total amount of money Rosni spent on Monday and Tuesday.

(b) If Rosni spent 50 cents on Monday, how much did she spend on these two days?

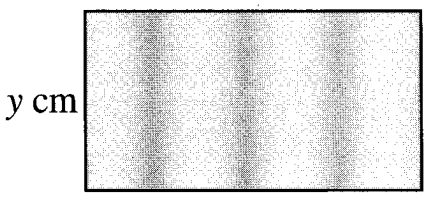
**8.** The breadth of a rectangle is half its length.

(a) If the breadth is $y$ cm, find in terms of $y$,

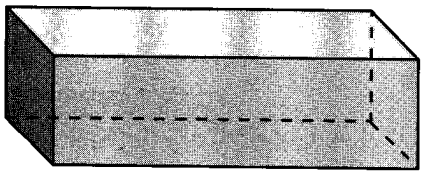
(i) the length of the rectangle,

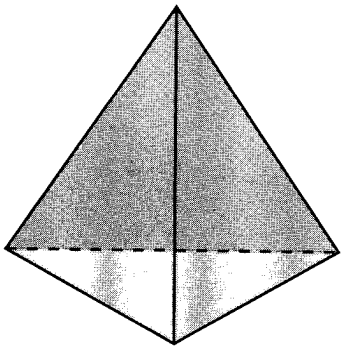
(ii) the perimeter of the rectangle.

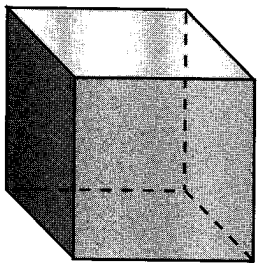
(b) What is the perimeter in cm if $y = 3$?

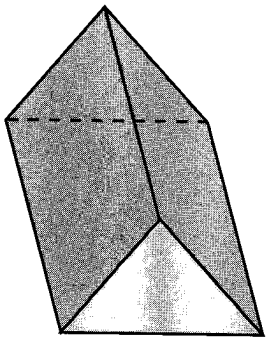


**9.** Match the solid with its name.









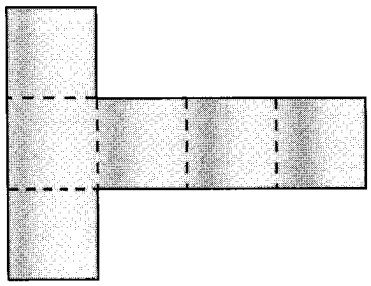
cube

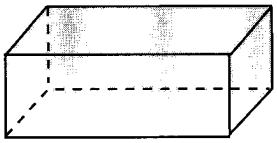
prism

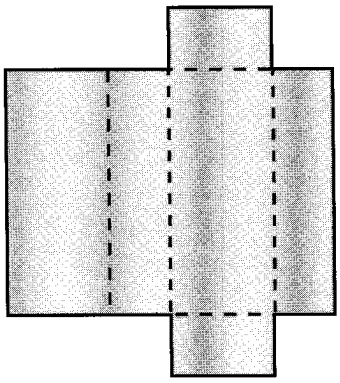
cuboid

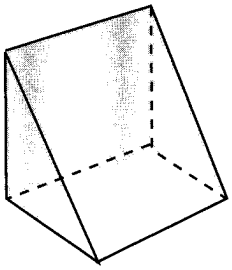
pyramid

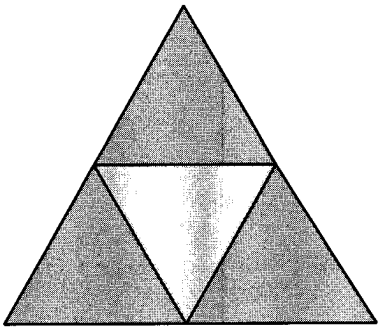
**10.** Match the net to the solid.

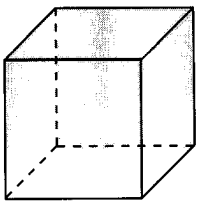


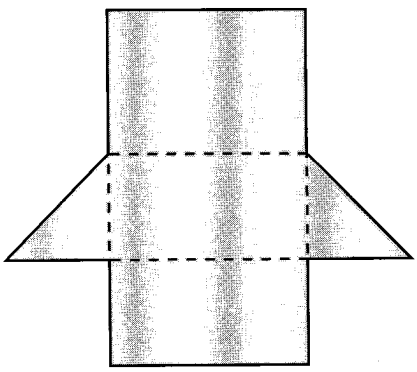


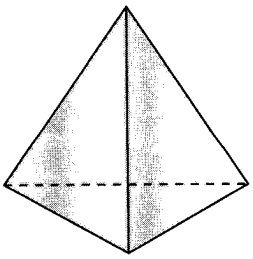






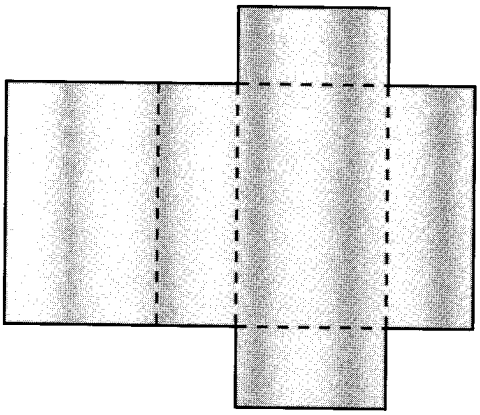




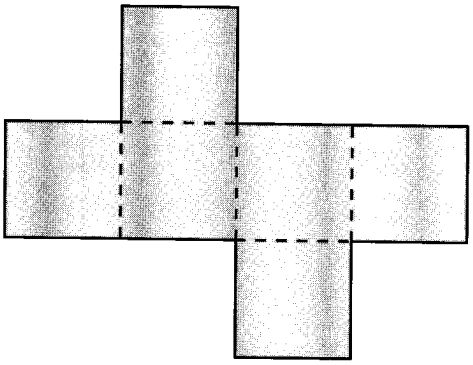


**11.** Name the solid (cube, cuboid, pyramid or prism) which can be formed by the net shown below:

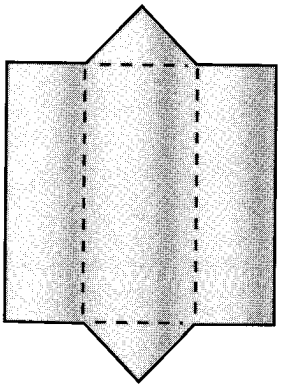
(a)



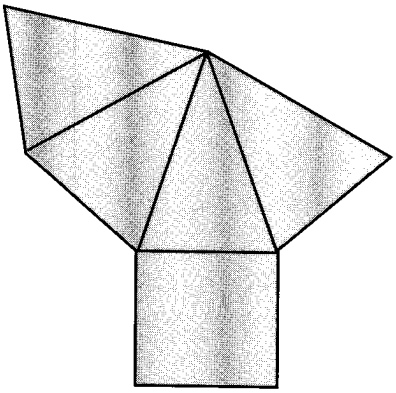
(b)



(c)



(d)



**12.** Write the following ratios as fractions.

(a) 3 : 5 ➡ ☐

(b) 1 : 7 ➡ ☐

(c) 6 : 1 ➡ ☐

(d) 7 : 10 ➡ ☐

**13.** Write the following fractions as ratios.

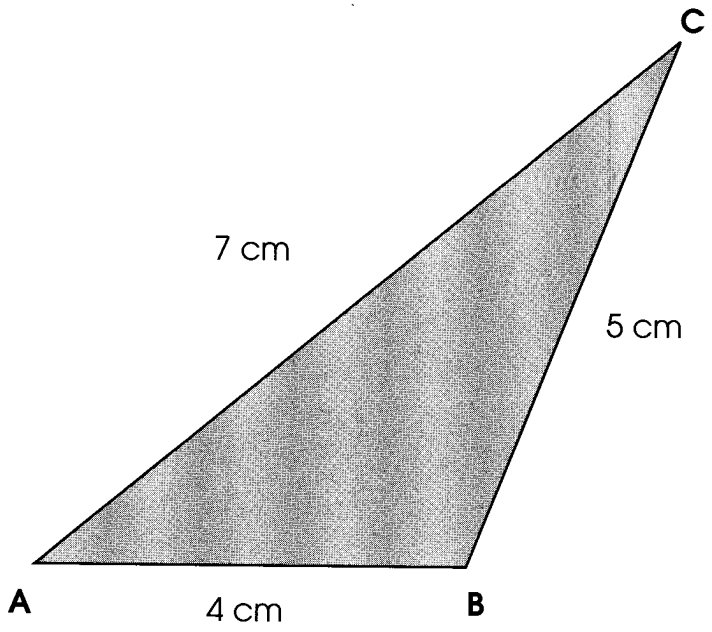
(a) $\frac{1}{4}$ ➡ ☐

(b) $\frac{5}{1}$ ➡ ☐

(c) $\frac{4}{5}$ ➡ ☐

(d) $\frac{9}{5}$ ➡ ☐

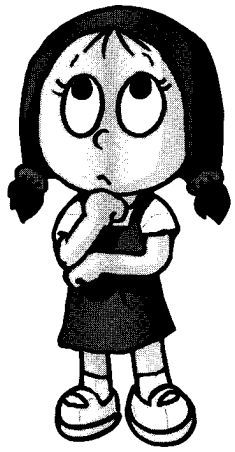
**14.** The lengths of the sides of the triangle ABC are as shown in the figure below:




(a) Find the ratio of AB : BC : AC.

(b) Find the ratio of AC to the perimeter of the triangle.

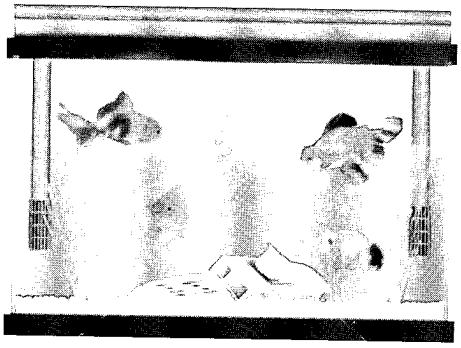
(c) What fraction of the perimeter is AB?



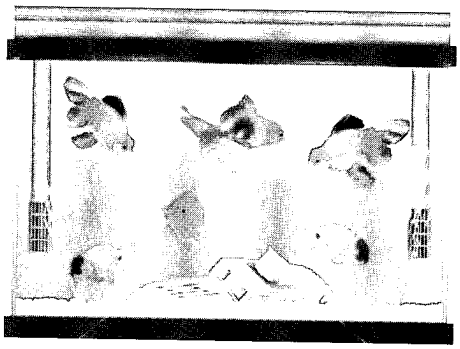
**15.**  There are 78 people in a party. The ratio of the number of female participants to male participants in the party is 4 : 9. How many female partcipants are there in the party?

**16.** John and his brother shared some cards in the ratio 4 : 5. John received 36 cards. How many cards were there in total?

**17.** There are 4 goldfish in Tank A and 6 goldfish in Tank B.



Tank A



Tank B

(a) Find the ratio of the number of goldfish in Tank A to that in Tank B. Express your answer in the simplest form.

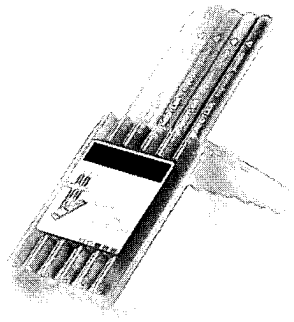
(b) If 4 goldfish are added to Tank A, how many goldfish must be added to Tank B so that the ratio of the number of goldfish in Tank A to the number of goldfish in Tank B remains the same as in (a)?

(c) If 9 goldfish are added to Tank B, how many goldfish must be added to Tank A so that the ratio of the number of goldfish in Tank A to the number of goldfish in Tank B remains the same as in (a)?

**18.** Abdullah has 16 colour pencils. Rama has 14 colour pencils.

(a) What is the ratio of the number of colour pencils Abdullah has to the number of colour pencils Rama has?

(b) What fraction of the number of colour pencils Abdullah has is the number of colour pencils Rama has?



**19.** The ratio of the number of pupils in Class 6A to that in Class 6B is 5 : 4. The ratio of the number of pupils in Class 6B to that in Class 6C is 2 : 3.

(a) Find the ratio of the number of pupils in Class 6A to that in Class 6B to that in Class 6C.

(b) If the number of pupils in Class 6B is 24, what are the numbers of pupils in Class 6A and in Class 6C?

# Revision 1B

Date: _____

**1.** Fill in each box with the required algebraic expression.

(a) The width of a rectangle is $\frac{1}{3}$ of its length. The length is $x$ cm. What is the width?

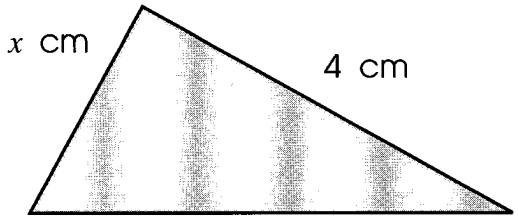
(b) A can of soft drink cost $x$ cents last year. It costs 5 cents more now. How much does the can of soft drink cost now?


(c) A basket had $x$ strawberries. 7 strawberries were rotten and were thrown away. The remaining strawberries were given equally to 2 sisters. How many strawberries did each sister receive?

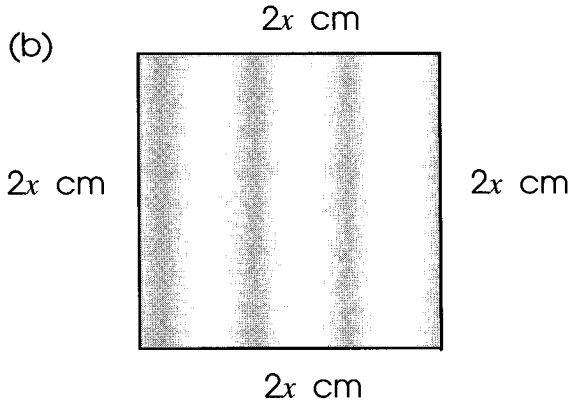
(d) A pencil cost $y$ cents. Aziz bought 2 such pencils and paid with a 50-cent coin. How much change did Aziz receive?

**2.** Find the perimeter of each of the following figures in terms of $x$ :

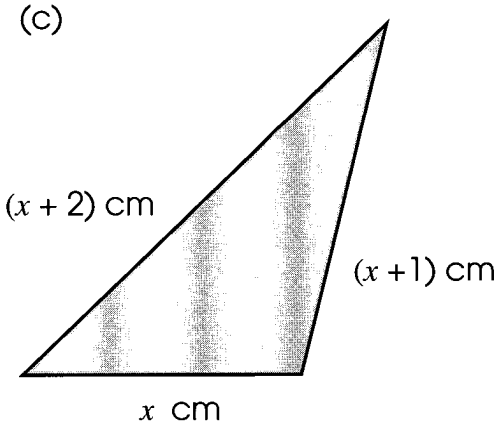
(a)



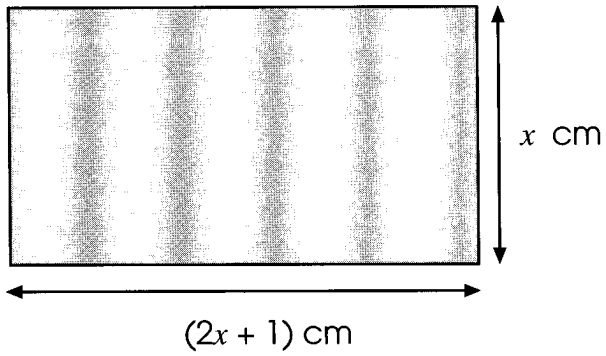

(b)




(c)




(d)



**3.** A can of pear syrup cost $\$x$. A can of abalone cost \$5 more.

(a) Find in terms of $x$, the cost of 2 cans of abalone and 3 cans of pear syrup.

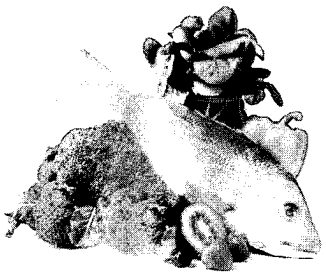
(b) If a can of pear syrup costs \$2.50, what is the total cost in dollars of all the items in (a)?

**4.** Jessica is $p$ years old. Her sister is 2 years older than her.

(a) Find their total age in terms of $p$.

(b) What is their total age in 3 years from now in terms of $p$?

**5.** A kilogram of vegetable cost $\$m$. A kilogram of fish cost five times as much as a kilogram of the vegetable. Mary bought 2 kg of vegetable and 1 kg of fish.



(a) How much did Mary spend altogether? Express your answer in terms of $m$.

(b) The cost of 1 kg of vegetable was \$2. Find the total amount of money Mary spent.

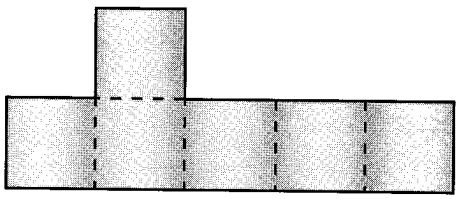
**6.** Three numbers are represented by $n$, $n + 1$, $n + 2$.

(a) What is the sum of the 3 numbers in terms of $n$?

(b) For $n = 51$, what is the sum of the 3 numbers?

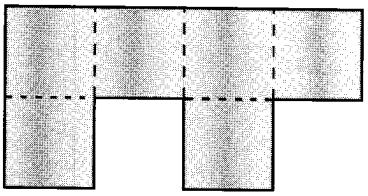
**7.** Which of the following drawings are nets of a cube?
Circle 'Yes' if it is and 'No" if it is not.

(a)



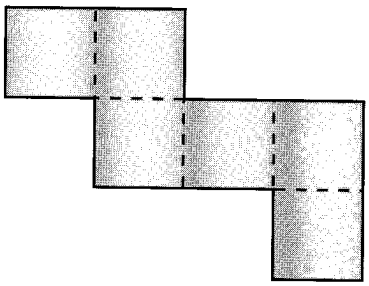
Yes / No

(b)



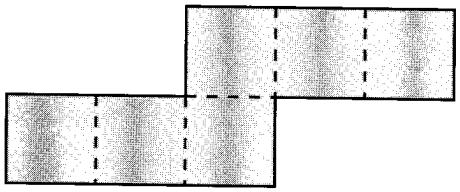
Yes / No

(c)



Yes / No

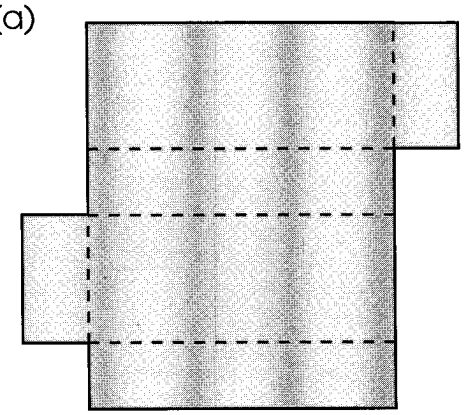
(d)



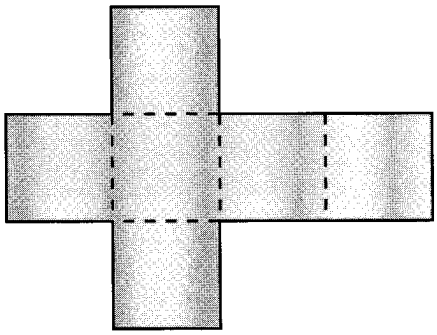
Yes / No

**8.** Write the name of the solid (cube, cuboid, prism or pyramid) formed by the net shown below.

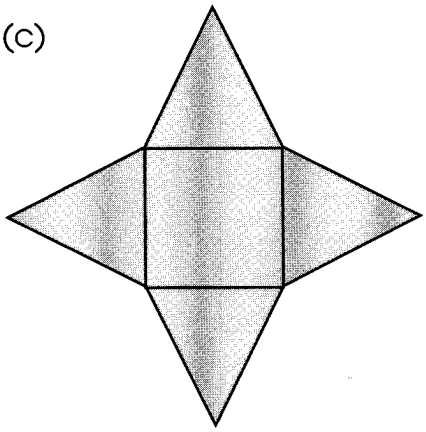
(a)



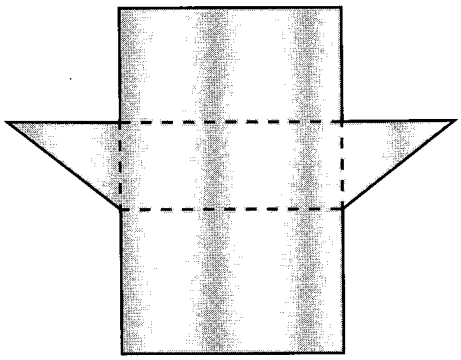
(b)



(c)

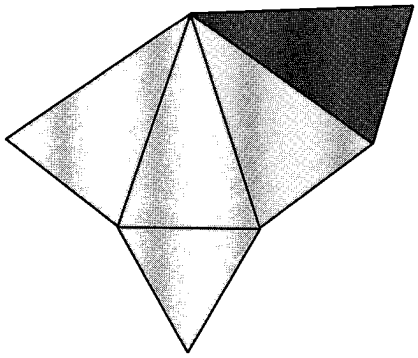


(d)



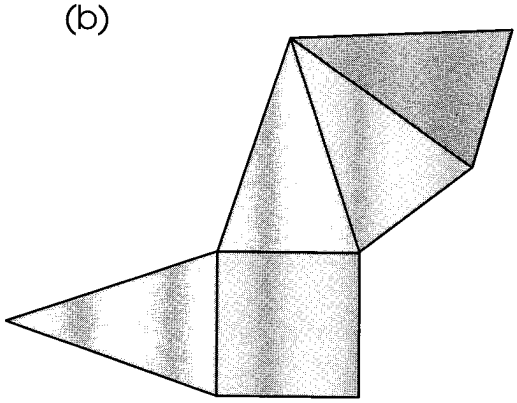
**9.** Is each of the following figures a net of a pyramid? Circle "Yes" or "No".

(a)



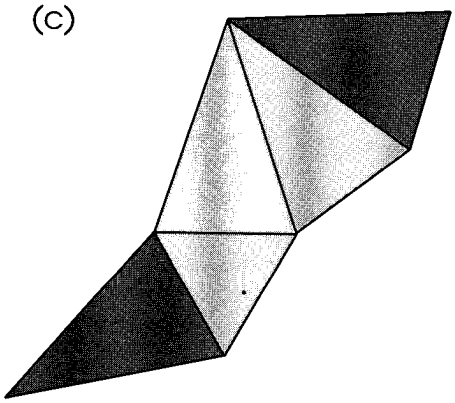
Yes / No

(b)



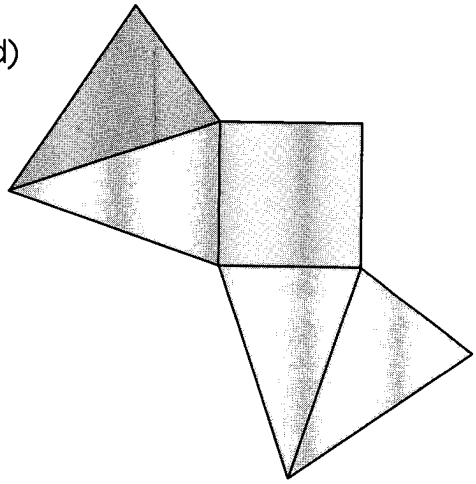
Yes / No

(c)



Yes / No

(d)



Yes / No

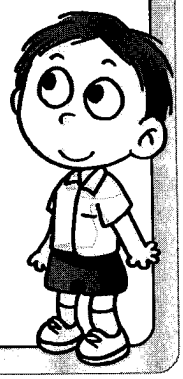
**10.** Write each of the following comparisons as a ratio (in its simplest form):

(a) 250 g to 1 kg

(b) 40 min to 2 h

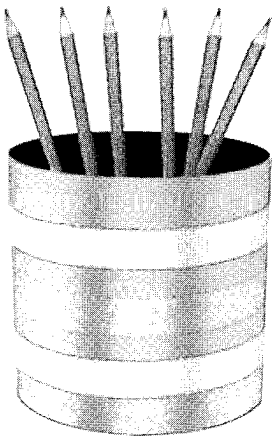
(c) 75 cm to 1 m

(d) \$0.50 to \$2



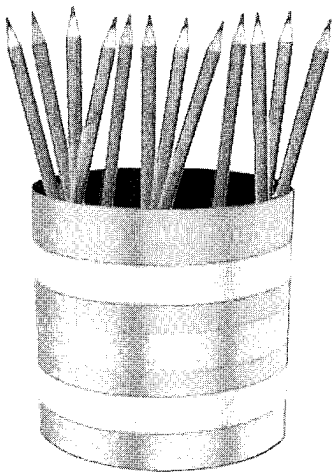
11.

A



6 pencils

B



12 pencils

(a) Fill in the boxes. Give your answer in the simplest form.

(i) The number of pencils in Holder B is ☐ times the number of pencils in Holder A.

(ii) The number of pencils in Holder A is $\frac{\square}{\square}$ of the number of pencils in Holder B.

(iii) The ratio of the number of pencils in Holder A to the number of pencils in Holder B is ☐ : ☐.

(b) 4 pencils are taken out from the Holder B. How many pencils have to be taken out from Holder A so that the ratio of the number of pencils in Holder A to the number of pencils in Holder B remains the same as before?

**12.** The ratio of the number of pupils in Class 6A to the number of pupils in Class 6B is 8 : 7. There are 32 pupils in Class A. How many pupils are there in Class 6A and 6B altogether?

**13.** The ratio of Peter's age to Nathan's age is 4 : 3. The ratio of Nathan's age to Kee-jin's age is 1 : 2.

(a) Find the ratio of Peter's age to Nathan's age to Kee-jin's age.

(b) If Nathan is 9 years old, how old is Peter?

**14.** The ratio of the amount of money John has to the amount of money Mary has is 3 : 7. Given that Mary has $60 more than John, how much does Mary have?

**15.**  The ratio of the number of boys to the number of girls in a school is 11 : 13. The total number of pupils in the school is 1920. How many more girls than boys are there in the school?

**16.** The ratio of the mass of coffee to the mass of milk to the mass of sugar is 6 : 3 : 2 for a certain brand of instant coffee mix. In making 150 kg of such instant coffee mix,

(a) how much coffee is needed?

(b) how much sugar is needed?

(c) how much more coffee than milk is needed ?

Give your answer correct to the nearest kg.