Choose a circle to show how much each sentence is like you	Very Unlike Me	Unlike Me	Like Me	Very Like Me
	1	2	3	4
01. I like maths at school.	◯	◯	◯	◯
02. I am good at maths.	◯	◯	◯	◯
03. My teacher thinks I am good at maths.	◯	◯	◯	◯
04. My Mum and Dad think I am good at maths.	◯	◯	◯	◯
05. I enjoy doing maths in my own time (not at school).	◯	◯	◯	◯
06. I enjoy doing things in maths that I haven't tried before.	◯	◯	◯	◯

Practice Questions

These practice questions are to help you understand how to show your answer for different types of questions.

P01. Who is holding a card with an even number on it?

Ben   Eru   Aroha   Davina
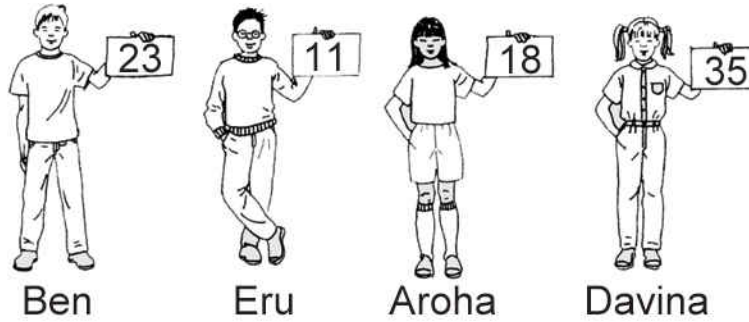
⬭   Ben

⬭   Eru

⬭   Aroha

⬭   Davina

P02. Complete this number pattern.

2, 4, ____, ____, 10

P03. What fraction of this circle is shaded?

$$\frac{\Box}{\Box}$$
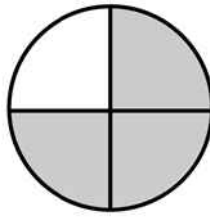
P04. Match the sentence with the correct shape.

☐ 1. I have three sides

☐ 2. I have 4 sides

a.

b.

c.
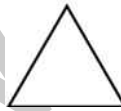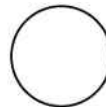
P05. Which numbers make this number sentence **TRUE**?

$$2 + ⭐ > 5$$

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

P06. Put the numbers 1, 2, 3, and 4 in the boxes to order these numbers from biggest (1) to smallest (4).

☐   3

☐   7

☐   2

☐   0

P07. Select whether the following statements are True or False.

	TRUE	FALSE
In the number 213, the value of 1 is ten.	◯	◯
In the number 504, the value of 5 is fifty.	◯	◯

01. Which means seven hundred thousand five hundred ninety-two?

◯   70 592

◯   700 592

◯   705 920

◯   7 005 920

02. The census showed that three hundred and fifty-six thousand and ninety-seven people lived in Middletown.
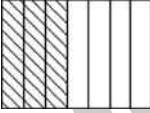Written as a number, that is

◯   350 697

◯   356 097

◯   356 907

◯   356 970

03. Which shows $\frac{3}{4}$ of the picture shaded?

04. Which set of numbers is in order from greatest to least?

○   147, 163, 234, 275

○   275, 234, 163, 147

○   275, 163, 234, 147

○   163, 275, 234, 147

05. By how much would the value of 5647 be decreased if the 5 were replaced by a 2?

○   3

○   300

○   3000

○   30 000

06. What number equals 3 ones + 5 tens + 4 hundreds + 60 thousands?

○   6453

○   60 453

○   64 530

○   354 060

○   604 530

07. What number would you have to subtract from 736290 to make the number 706290?

○   3 000

○   30 000

○   30

○   300 000

08. Which square is quarter shaded?

○

○

○
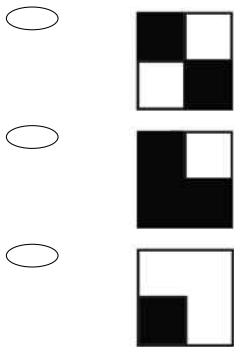
09. The numbers in the pattern decrease by the same amount each time.
What are the next three numbers in this pattern?
10, 8, 6, 4, 2, ___, ___, ___

○   0, -2, -4

○   0, -1, -2

○   0, 2, 4

○   0, 1, 2

10. The picture below shows how Kenta plans to create a tile border around the edge of a table.

If the pattern is continued all the way around the table, how many tiles with dots in the centre will be needed in all?
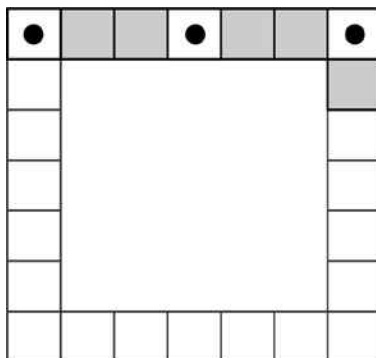
  ⬭   8

  ⬭   9

  ⬭   11

  ⬭   12

11. Tasi washed 4 cars in the morning at a church car wash. In the afternoon he washed 3 times as many.

How many cars did he wash in the afternoon?

  ⬭   3

  ⬭   7

  ⬭   12

  ⬭   16

12. Thomas is setting up tables for a banquet. He knows that four people can sit around the table in Part A. When he puts two of these tables together, he can seat six people (Part B).
How many people can Thomas seat if he puts three tables together?

Part A   Part B
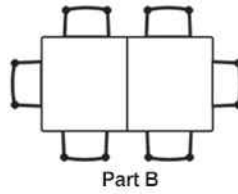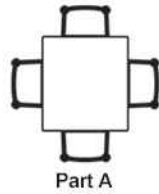
○   6

○   8

○   10

○   12

13. Which describes a rule that the number machine could be using?

In 2 → 9 Out   In 9 → 16 Out   In 16 → 23 Out
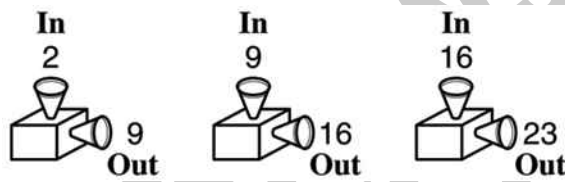
○   Multiply by 4; add 1

○   Divide by 4; add 1

○   Subtract 7

○   Add 7

14. Danny tossed 2 coins 10 times. The results are shown in the tally chart below. Which graph shows these results?

(2 heads coins)	//
(1 head 1 tail coins)	ⅢⅠ
(2 tails coins)	///

○ **Coin Toss Results**

Result — 2 heads / 1 head, 1 tail / 2 tails

0 1 2 3 4 5 6
Number of Times

○ **Coin Toss Results**

Result — 2 heads / 1 head, 1 tail / 2 tails

0 1 2 3 4 5 6
Number of Times

○ **Coin Toss Results**

Result — 2 heads / 1 head, 1 tail / 2 tails

0 1 2 3 4 5 6
Number of Times

○ **Coin Toss Results**

Result — 2 heads / 1 head, 1 tail / 2 tails

0 1 2 3 4 5 6
Number of Times
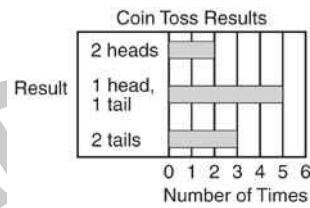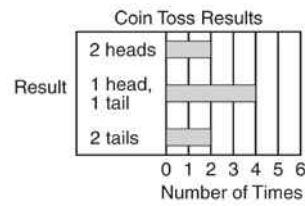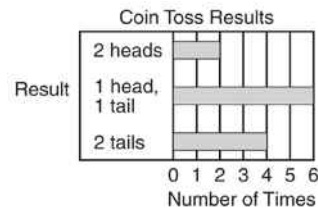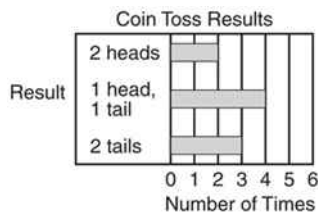
15. Which two points appears to lie on the line of symmetry for the shaded figure shown on the grid below?
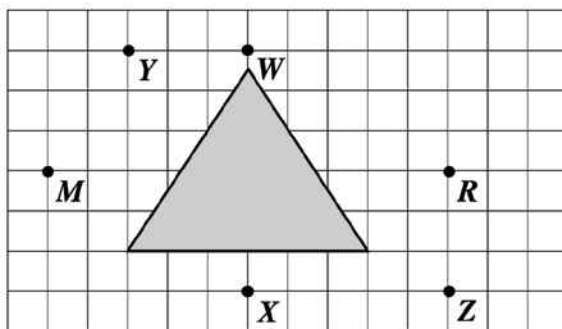
- ⬭ Points *M* and *R*
- ⬭ Points *R* and *Z*
- ⬭ Points *W* and *X*
- ⬭ Points *Y* and *Z*

16. A company has 6 big trucks. Each truck has 18 wheels. How many wheels is this in all?

- ⬭ 24
- ⬭ 96
- ⬭ 108
- ⬭ 116

17. The line plot below shows how students scored on last week's vocabulary test. How many students scored 95 or higher on the test?

Vocabulary Test Scores

KEY
★ = 1 student

70 75 80 85 90 95 100
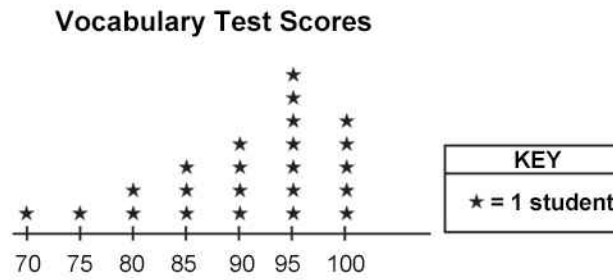
- ⬭ 5 students
- ⬭ 7 students
- ⬭ 12 students
- ⬭ 16 students

18. This is part of an opinion scale. The opinions Agree, Strongly Agree, Undecided and Disagree are missing.
Which opinion would be **BEST** located at **X**?

Strongly
Disagree   X
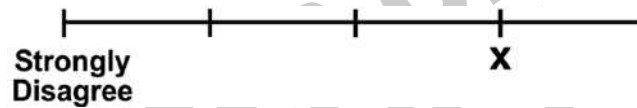
- ⬭ Agree
- ⬭ Strongly Agree
- ⬭ Undecided
- ⬭ Disagree

19. What is a rule used in the table to get the numbers in column *B* from the numbers in column *A*?

Column A		Column B
12	→	3
16	→	4
24	→	6
40	→	10

- ⬭ Divide the number in column *A* by 4.

- ⬭ Multiply the number in column *A* by 4.

- ⬭ Subtract 9 from the number in column *A*.

- ⬭ Add 9 to the number in column *A*.

20. ___, 0.5, 0.8, ___, 1.4, 1.7
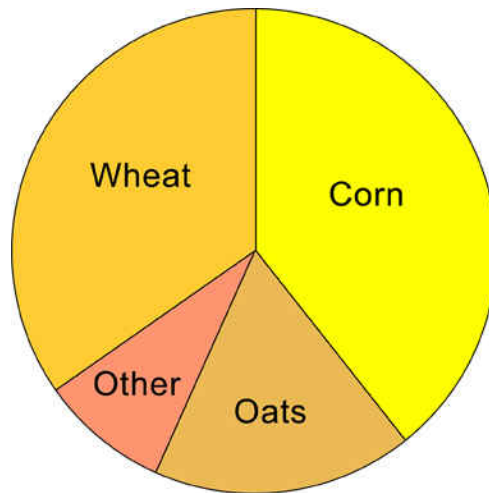Which numbers, in order, are missing from this sequence?

- ⬭ 0.2 and 1.1

- ⬭ 0.2 and 1.2

- ⬭ 0.4 and 0.9

- ⬭ 0.4 and 1.0

21. The graph shows the distribution of crops grown in a certain country.
According to the information in the graph, which of these statements is **TRUE**?

- ⬭   More oats are grown than wheat.
- ⬭   Corn is more than one-half the country's crop.
- ⬭   Oats are more than one-third of the country's crop.
- ⬭   The total crop of oats and wheat is greater than the corn crop.

22. The design shown below is on the front of Jamie's T-shirt.
When she looks at herself in the mirror, what will she see?

- ⬭   Maine
- ⬭   Maine
- ⬭   Maine
- ⬭   Maine

23. On Saturday, Joseph compared the price of one litre of regular petrol at five different locations. The graph below shows the prices he recorded.
Which is *closest* to the price of one litre of petrol at location #5?
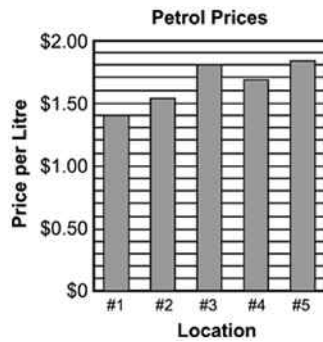
- ⬯ $1.82
- ⬯ $1.75
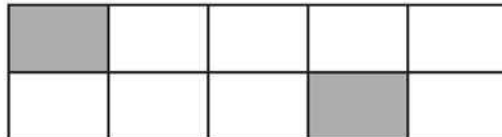- ⬯ $1.53
- ⬯ $1.08

24. Which of these is another way to write the product 12 x 7?
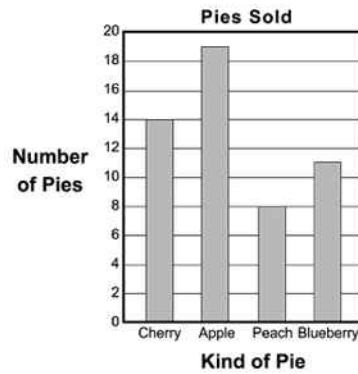
- ⬯ 2 x 3 x 7
- ⬯ 3 x 4 x 7
- ⬯ 3 x 6 x 7
- ⬯ 6 x 6 x 7

25. What percentage of the large rectangle below is shaded?

- ⬯ 2%
- ⬯ 4%
- ⬯ 20%
- ⬯ 25%

26. The bar graph shows the number of pies sold during a bake sale.
How many more apple pies were sold than peach?

Pies Sold

Number of Pies

Kind of Pie

- ◯ 5
- ◯ 8
- ◯ 10
- ◯ 11

27. A teacher asked 30 students in her class the flavour of their favourite ice cream. The table shows how the teacher recorded the students' responses.
In the bar graph beside the table, which ice cream flavour corresponds to the bar that is labelled X?

Favourite Ice Cream	Number of Students
Butterscotch	IIII
Chocolate	HHT HHT
Strawberry	HHT IIII
Vanilla	HHT II

Favourite Ice Cream
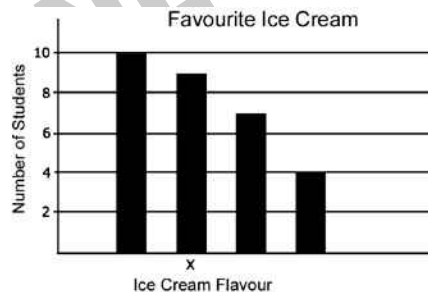
- ◯ Butterscotch
- ◯ Chocolate
- ◯ Strawberry
- ◯ Vanilla

**28.** Mario sells 80 pencils a day from his supply of 1000 pencils.
Which of the following is **TRUE**?

◯   He will run out of pencils in 7 days.

◯   He will have enough pencils to sell 80 each day for at least 10 days.

◯   He will have enough pencils to sell 80 each day for at least 80 days.

◯   He will have enough pencils to sell 80 each day for at least 100 days.

29. In this diagram, 2 out of every 3 squares are shaded.
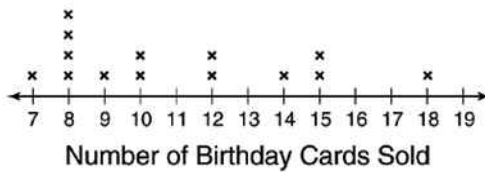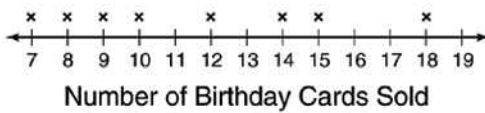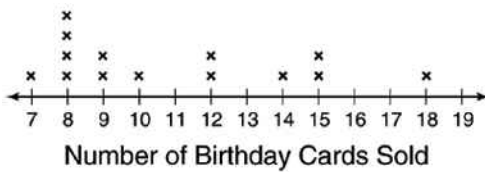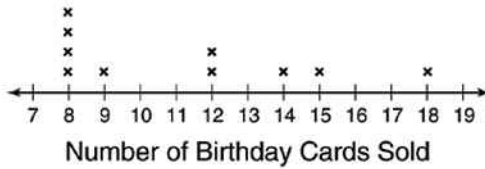Which diagram has 3 out of every 4 squares shaded?
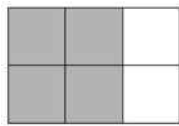
30. The table shows the number of birthday cards a shop sold each day in a two-week period.
Which line plot displays this information?

| Sun.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.
15	8	9	8	10	12	18

Sun.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.
7	9	8	12	8	15	14

○
```
    ×
    ×
    ×         ×
    ×   ×     ×     ×   ×           ×
 ←──┼───┼───┼───┼───┼───┼───┼───┼───┼───┼───┼───┼──→
    7   8   9  10  11  12  13  14  15  16  17  18  19
            Number of Birthday Cards Sold
```

○
```
    ×
    ×
    ×   ×         ×           ×
×   ×   ×   ×     ×       ×   ×           ×
←──┼───┼───┼───┼───┼───┼───┼───┼───┼───┼───┼───┼──→
   7   8   9  10  11  12  13  14  15  16  17  18  19
            Number of Birthday Cards Sold
```

○
```
×   ×   ×   ×     ×       ×   ×           ×
←──┼───┼───┼───┼───┼───┼───┼───┼───┼───┼───┼───┼──→
   7   8   9  10  11  12  13  14  15  16  17  18  19
            Number of Birthday Cards Sold
```

○
```
    ×
    ×
    ×       ×     ×           ×
×   ×   ×   ×     ×       ×   ×           ×
←──┼───┼───┼───┼───┼───┼───┼───┼───┼───┼───┼───┼──→
   7   8   9  10  11  12  13  14  15  16  17  18  19
            Number of Birthday Cards Sold
```

Use the following information to answer question31..

This graph shows the speed of a racing car along a flat 3 kilometre track during its second lap.

Speed of a racing car along a 3 km track (second lap)

Speed (km/h)

Distance along the track (km)
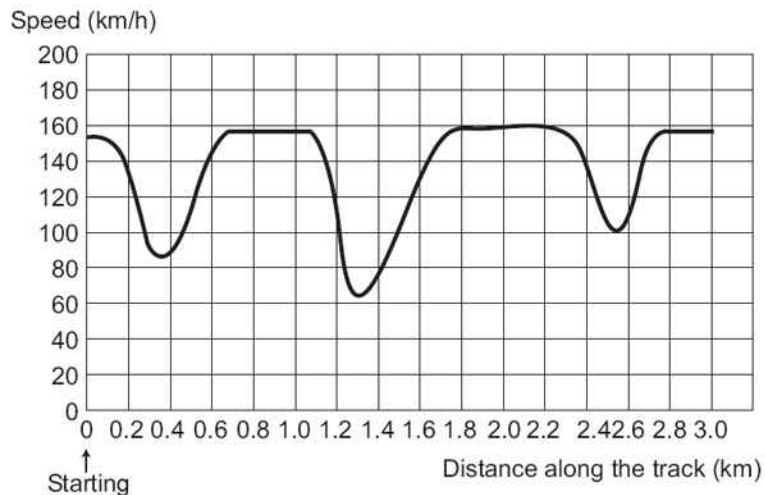
Starting

31. Where was the lowest speed recorded during the second lap?

◯   At the starting line.

◯   At about 0.8 km.

◯   At about 1.3 km.

◯   Half way around the track.

End of Section

32. The points scored by a school football team this season are:

6, 7, 11, 12, 22, 28, 28, 30, 33, 35

Which of the following stem-and-leaf plots correctly displays the data?

○

Stem	Leaf
0	6, 7
1	1, 2
2	2, 8, 8
3	0, 3, 5

○

Stem	Leaf
0	6, 7
1	1, 2
2	2, 8
3	0, 3, 5

○

Stem	Leaf
0	3
1	1
2	1, 2
3	3
5	3
7	0
8	2, 2

○

Stem	Leaf
0	3
1	1
2	1, 2
3	3
4	
5	3
6	
7	
8	2, 2

33. Which graph **BEST** illustrates the relationship shown in this table?

| Kilometres Walked	Amount Earned
2	$6
4	$12
6	$18
8	$24
10	$30
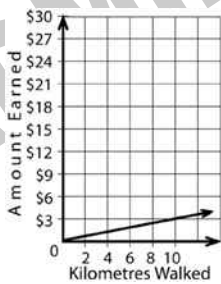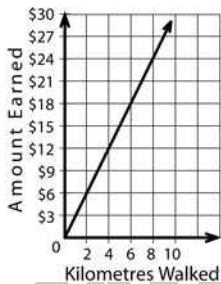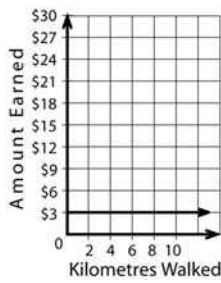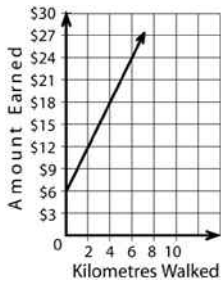
34. Which of the following rules could be used to make the number pattern shown below?
1024, 256, 64, 16

⬭   Subtract 4

⬭   Add 4

⬭   Multiply by 4

⬭   Divide by 4

35. Kim wants to build a full-size boat. Her scale model of the boat is 6cm long and 3cm wide.
If the width of the full-size boat will be 4 metres, what will be the length, in metres, of the full-size boat?

Scale model

3 cm

6 cm
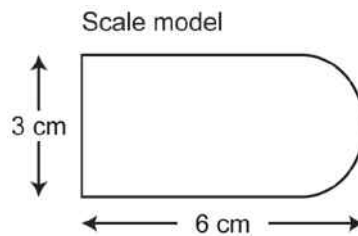
⬭   2 metres

⬭   4 metres

⬭   8 metres

⬭   12 metres

36. In one hour, Tracy walked 2.31 kilometres on a treadmill. Lisa walked 1.95 kilometres in the same amount of time.
How much farther did Tracy walk than Lisa?

⬭   1.66 kilometres

⬭   1.36 kilometres

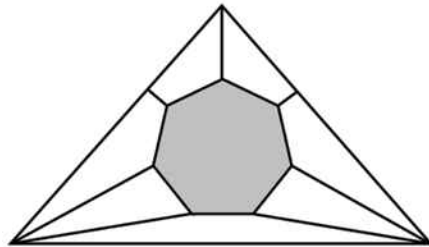⬭   0.46 kilometre

⬭   0.36 kilometre

37. Which answer completes this subtraction?

$$13.63$$
$$- \ 4.72$$

- ⬯ 8.89
- ⬯ 8.91
- ⬯ 9.91
- ⬯ 11.11

38. Look at the design below.
Which term identifies the shaded part in the centre of the design?

- ⬯ Heptagon
- ⬯ Pentagon
- ⬯ Nonagon
- ⬯ Decagon

39. Lola is making ice cream sundaes for her friends. They may choose between 3 kinds of ice cream and 2 kinds of toppings. The chart below shows the choices.
What is the total number of combinations of 1 kind of ice cream and 1 kind of topping that Lola's friends can choose?

Choices for Sundaes

Ice Cream	Toppings
Chocolate Strawberry Vanilla	Sprinkles Syrup

- ⬭ 5
- ⬭ 6
- ⬭ 9
- ⬭ 10

40. 1 mile = 5280 feet
How many feet are in 15 miles?

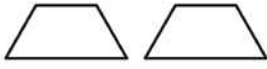- ⬭ 352
- ⬭ 35 200
- ⬭ 79 200
- ⬭ 84 480
- ⬭ 89 760
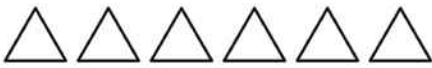
41. What is the greatest common divisor of 54, 36, and 24?

- ⬭ 2
- ⬭ 3
- ⬭ 6
- ⬭ 9

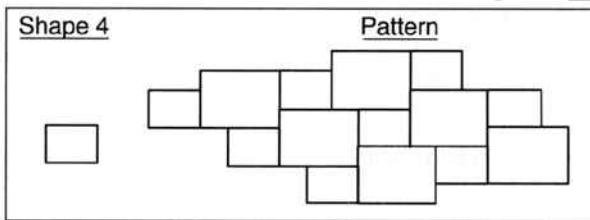**42.** Which group of figures can **NOT** be made by cutting up the hexagon?
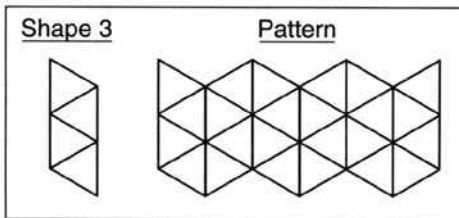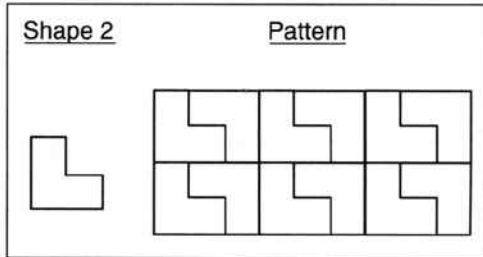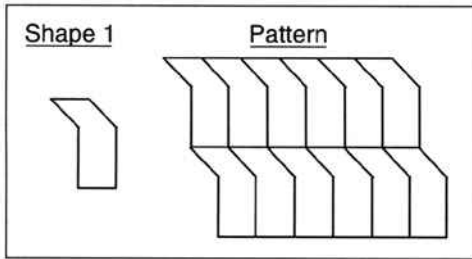
○ △△△△△△

○ □◺◺

○ ⏢ ⏢

○ ▯ △ △

43. If the value of the expression $x + 2$ is less than 12, which of the following could be a value of x?

○ 16

○ 14

○ 12

○ 10

○ 8

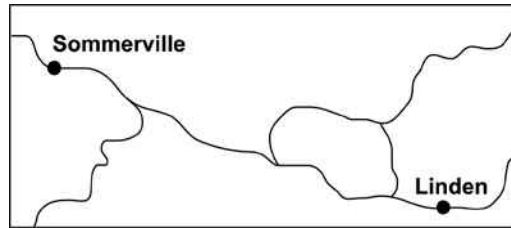**44.** Which pattern below is made by *reflecting* the shape shown?

◯
Shape 1   Pattern

◯
Shape 2   Pattern

◯
Shape 3   Pattern

◯
Shape 4   Pattern

45. On the map shown, 1 unit of length represents 50 kilometres.
The distance between Sommerville and Linden is 2.5 units.
What is the actual distance between these towns?

○   2.5 km

○   20 km

○   52.5 km

○   125 km

46. A cold country records the temperature on 4 days.

Put the numbers 1, 2, 3, and 4 in the boxes to order the temperatures from the highest (1) to the lowest (4).

☐   -15.2ºC

☐   -20.6ºC

☐   -11.3ºC

☐   -18.5ºC

47. Kyle needs to buy brushes, nails, and paint to make bookshelves. He will sell the bookshelves for $18 each.

What additional information does Kyle need to calculate the profit he will make from selling 10 bookshelves?

○   The kind of wood

○   The size of the nails and the colour of the paint

○   The amount he will collect for selling 10 bookshelves

○   His cost to make one bookshelf