

Modern Primary Mathematics

P2B
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Joanne Choi

Second Edition

Workbook

2D





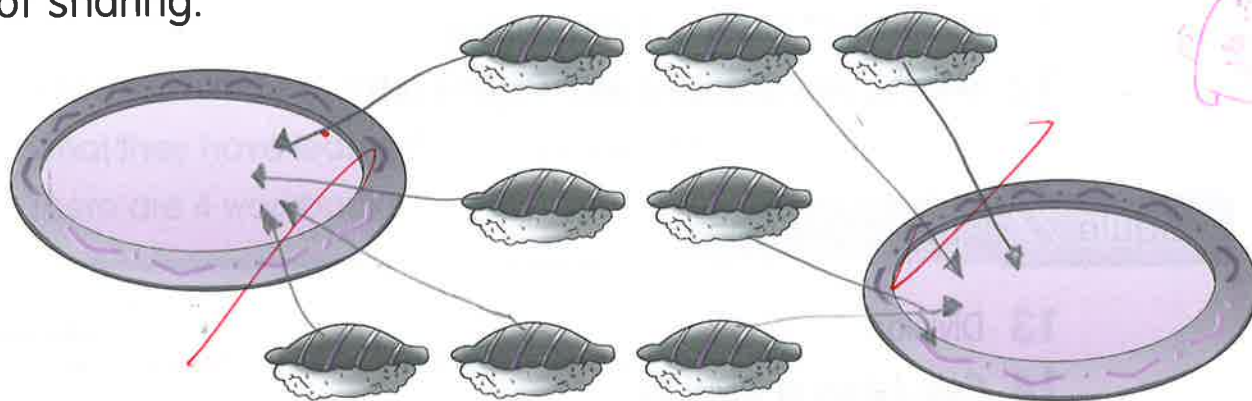
Modern Educational Research Society



11 Methods of Sharing and Grouping



Let's draw and fill in the blanks.

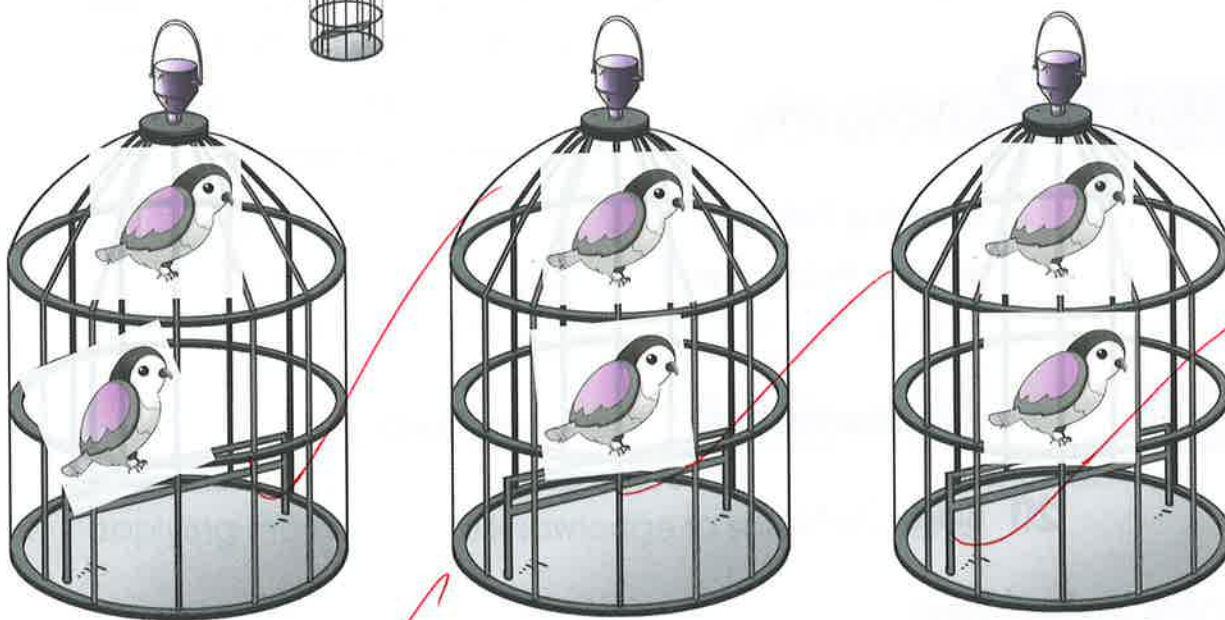
- ① Put 8  into 2 groups equally. Draw  to show the steps of sharing.



There are 4  in each group.

Let's paste and fill in the blanks.

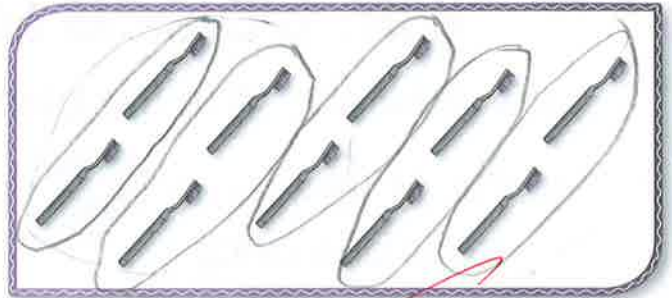
- ② Take out 6  stickers from the Sticker Page and paste them equally in the 3 .



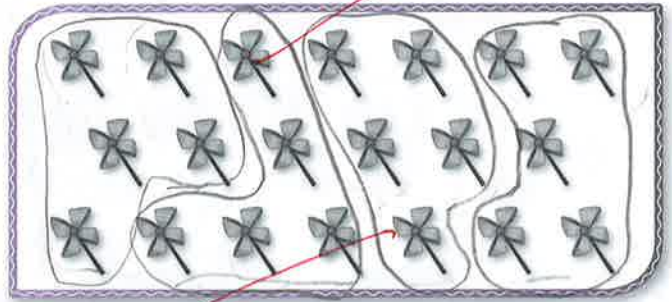
There are 2  in each .

Follow the instructions and circle each group of objects. Fill in the blanks.

- ③ Put 10 toothbrushes in boxes of 2. There are a total of 5 boxes.



- ④ Put 20 pinwheels in groups of 5. There are a total of 4 groups.



Household Shop

- ⑤ Follow the instructions and put 12 clothes hangers into groups.



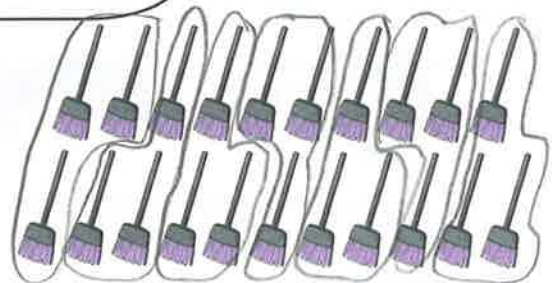
- Ⓐ Put the clothes hangers in groups of 3. There are a total of 4 groups.
- Ⓑ Put the clothes hangers in groups of 4. There are a total of 3 groups.

⑥



If I put 21 brooms in groups and with no brooms left, how can I put them?

Put them in groups of 3.
There are a total of 7 groups.

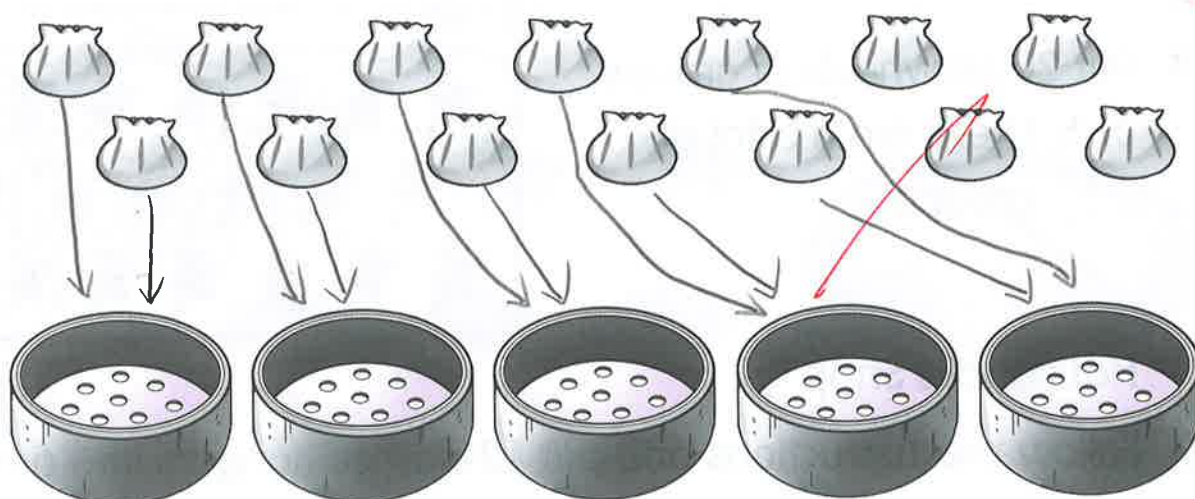








Date: 28th April, 2022Score:

12 Sharing and Grouping with Objects Left





Let's draw and fill in the blanks.

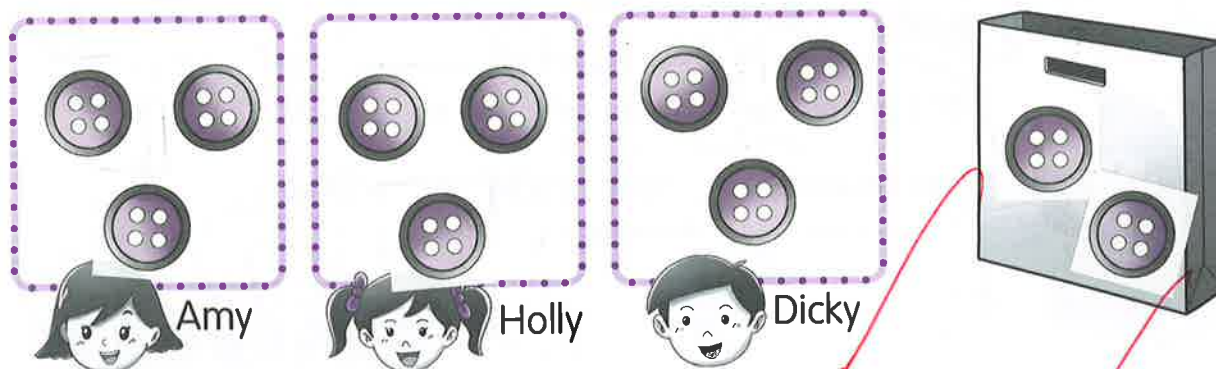
- ① ① Put 14  into 5  equally. Draw \longrightarrow to show the steps of sharing.





- ② Each  contains 2 , 4  are left.
- ③ If there are 3  in each , then 1 more  (s/are) needed.

Let's paste and fill in the blanks.

- ② Take out 11  stickers from the Sticker Page and paste them equally in each . Paste the remaining  stickers in .

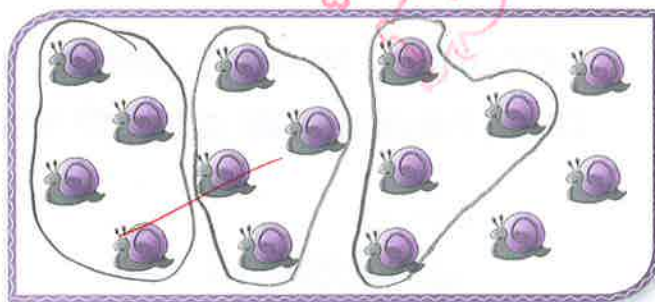


If the remaining  are given to Amy, then she gets 3  in total.

Follow the instructions and circle each group of objects. Fill in the blanks.

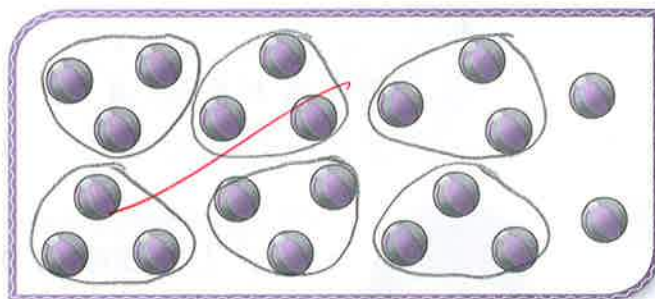
- ③ Put 15 snails into groups of 4.
There are a total of 3 groups.

3 snail(s) is/are left.



- ④ Put 20 balls into packs of 3.
There are a total of 6 packs.

2 ball(s) is/are left.



Jewellery Shop

- ⑤ Follow the instructions and put 17 rings into groups.



- a) Put the rings into groups of 4. There are a total of 4 groups. 1 ring(s) is/are left.

- b) Put the rings into groups of 5. There are a total of 3 groups. 2 ring(s) is/are left.

If the remaining rings are put into a group too, 1 more ring(s) is/are needed.

- ⑥ Miss Lee buys some rings. She puts them either into groups of 2 or groups of 3, there is 1 ring left. Which of the following may be the number of Miss Lee's rings? (Circle the answer)

(11 / 12 / 13 / 14)



13 Division

According to each person's speech, guess which division does he/she talk about? Write the letter for the answer in ☐.

A

$$40 \div 5 = 8$$

C

$$\begin{array}{r} 5 \\ 7 \overline{)40} \\ \underline{35} \\ 5 \end{array}$$

D

$$\begin{array}{r} 5 \\ 8 \overline{)40} \\ \underline{40} \\ 0 \end{array}$$

B

$$40 \div 6 = 6 \cdots 4$$

①



The divisor of the division is 8.

D

②



The quotient and the remainder of the division are the same.

C

③

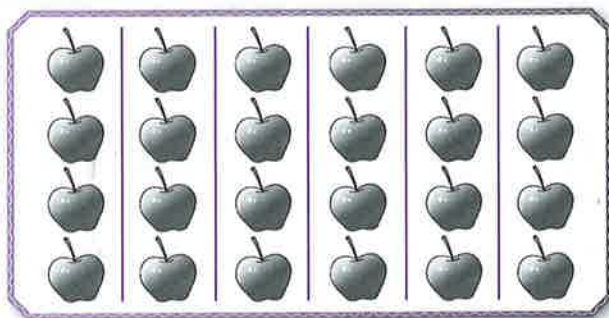


The divisor and the quotient of the division are the same.

B

Calculate and fill in the blanks.

- ④ Divide 24 apples into 6 groups equally. There are 4 apples in each group.

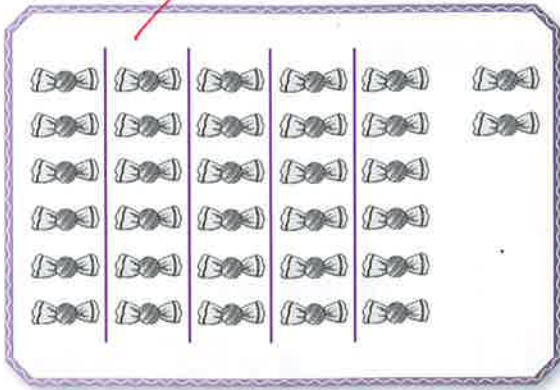


Horizontal form: $24 \div 6 = \boxed{4}$

Column form:

$$\begin{array}{r} \boxed{4} \\ \boxed{6} \overline{)24} \\ \underline{24} \\ 0 \end{array}$$

- ⑤ Divide 32 candies into 5 groups equally. There are 6 candies in each group. 2 candies are left.



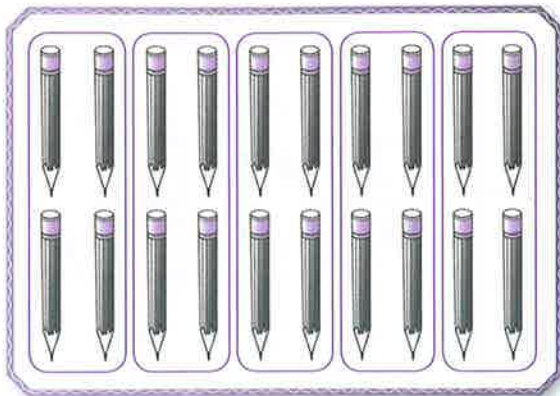
Horizontal form:

$$32 \div 5 = 6 \dots 2$$

Column form:

$$\begin{array}{r} 6 \\ 5 \overline{) 32} \\ \underline{30} \\ 2 \end{array}$$

- ⑥ Put 20 pencils into portions of 4. There are 5 (pieces / portions) in total.



Horizontal form:

$$20 \div 4 = 5$$

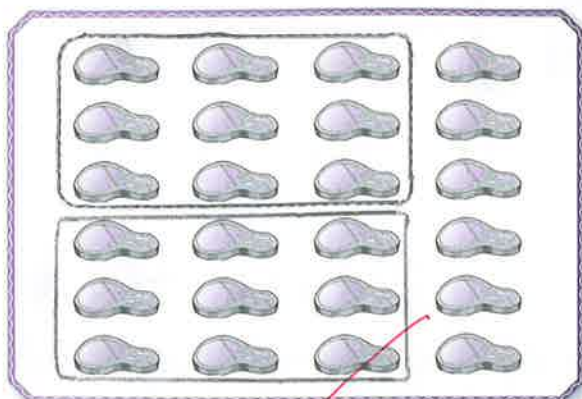
Column form:

$$\begin{array}{r} 5 \\ 4 \overline{) 20} \\ \underline{20} \\ 0 \end{array}$$

Look at the picture. Fill in the blanks and calculate.

- ⑦ Put 24 pieces of steak into portions of 9. There are 2 portions in total. 6 pieces of steak are left.

Write the unit.



Horizontal form:

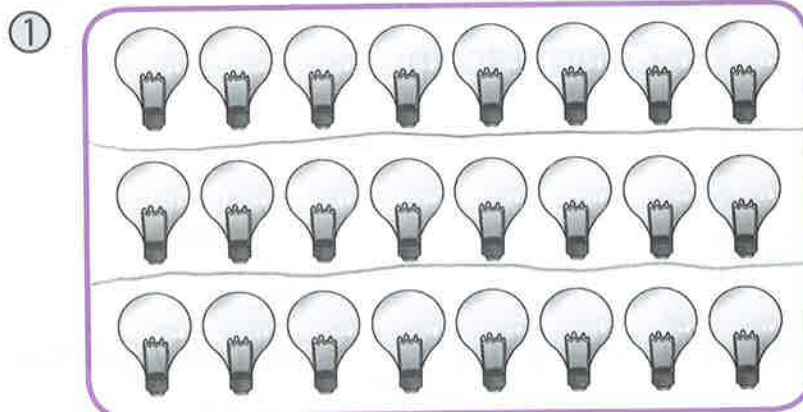
$$24 \div 9 = 2 \dots 6$$

Column form:

$$\begin{array}{r} 2 \\ 9 \overline{) 24} \\ \underline{18} \\ 6 \end{array}$$

14 Calculation of Division

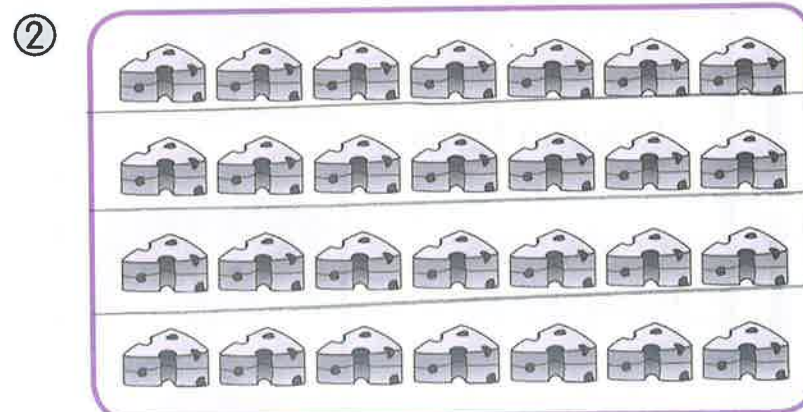
Look at the pictures and fill in the blanks.



1
2
3

$$24 \div 8 = \boxed{3}$$

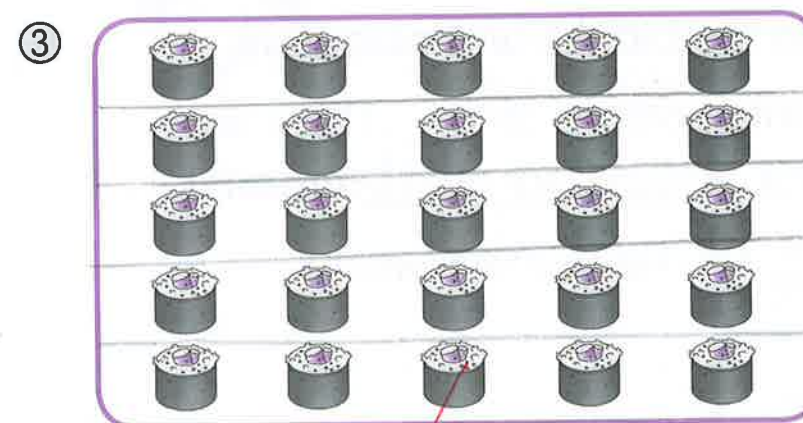
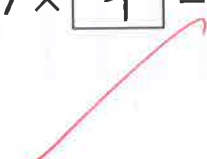
$$8 \times \boxed{3} = 24$$



1
2
3
4

$$\boxed{28} \div 7 = \boxed{4}$$

$$7 \times \boxed{4} = \boxed{28}$$



1
2
3
4
5

$$25 \div \boxed{5} = \boxed{5}$$

$$\boxed{5} \times \boxed{5} = 25$$



Fill in the blanks.

④ $6 \times \boxed{9} = 54$

$$54 \div 6 = \boxed{9}$$

$$\boxed{9} \times 6 = 54$$

$$54 \div \boxed{9} = 6$$

Fill in the blanks and calculate.

⑤ ① Complete the following table.

| × | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|----|----|----|----|----|----|----|----|
| 3 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 |
| 4 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 |

⑥ $24 \div 3 = 8$

⑦ $36 \div 4 = 9$

Calculate.

⑧ $\begin{array}{r} \boxed{3} \\ 3 \overline{) 9} \\ \underline{9} \end{array}$

⑨ $\begin{array}{r} \boxed{10} \\ 2 \overline{) 20} \\ \underline{20} \end{array}$

⑩ $\begin{array}{r} \boxed{9} \\ 8 \overline{) 72} \\ \underline{72} \end{array}$

⑪ $\begin{array}{r} \boxed{8} \\ 6 \overline{) 52} \\ \underline{48} \\ \boxed{4} \end{array}$

⑫ $\begin{array}{r} \boxed{8} \\ 8 \overline{) 71} \\ \underline{64} \\ \boxed{7} \end{array}$

⑬ $\begin{array}{r} \boxed{7} \\ 9 \overline{) 64} \\ \underline{63} \\ \boxed{1} \end{array}$

⑭ $18 \div 2 = 9$

⑮ $29 \div 6 = 4 \dots 5$

⑯ $58 \div 9 = 6 \dots 4$

⑰ $32 \div 8 = 4$

⑱ $\begin{array}{r} \boxed{7} \\ 5 \overline{) 35} \\ \underline{35} \\ 0 \end{array}$

⑲ $\begin{array}{r} \boxed{6} \\ 7 \overline{) 43} \\ \underline{42} \\ 1 \end{array}$

⑳ $35 \div 5 = 7$

㉑ $43 \div 7 = 6 \dots 1$

㉒ $45 \div 5 = 9$

㉓ $26 \div 4 = 6 \dots 2$

㉔ $\begin{array}{r} \boxed{9} \\ 5 \overline{) 45} \\ \underline{45} \\ 0 \end{array}$

㉕ $\begin{array}{r} \boxed{6} \\ 4 \overline{) 26} \\ \underline{24} \\ 2 \end{array}$



15 Word Problems

Solve the following problems and show your working.

- ① 8 stamps can redeem a bottle of soy sauce. Mum has 32 stamps. At most how many bottles of soy sauce can she redeem?

Number of bottles of soy sauce can be redeemed at most:
 $(32 \div 8)$ bottles $(32 \div 8)$ bottles
 $= 4$ bottles 4 bottles

$$\begin{array}{r} 4 \\ 8 \overline{) 32} \\ \underline{32} \\ 0 \end{array}$$

- ② Put 54 fish into 6 fish tanks equally. How many fish are there in each fish tank?

Number of fish in each fish tank:
 $54 \text{ fish} \div 6$
 $= 9$ fish

$$\begin{array}{r} 9 \\ 6 \overline{) 54} \\ \underline{54} \\ 0 \end{array}$$

- ③ Put 47 pencils into packs of 7. How many packs are there? How many pencils are left?

Number of packs:
 $(47 \div 7)$ packs
 $= 6$ packs...5 pencils

$$\begin{array}{r} 6 \\ 7 \overline{) 47} \\ \underline{42} \\ 5 \end{array}$$

A-3

- ④ Put 34 egg tarts into 4 trays equally. How many egg tarts are there in each tray? How many egg tarts are left?

Number of egg tarts in each tray:
 $34 \text{ egg tarts} \div 4$
 $= 8 \text{ egg tarts} \dots 2 \text{ egg tarts}$

$$\begin{array}{r} 8 \\ 4 \overline{) 34} \\ \underline{32} \\ 2 \end{array}$$

- ⑤ Roy has 21 peaches. He puts every 4 peaches into a box. If he has to put all peaches into boxes, at least how many boxes are needed?

Number of least boxes needed:
 $21 \text{ boxes} \div 4$
 $= 5 \text{ boxes} \dots 1 \text{ peach}$
 $= 5 \text{ boxes} \dots 1 \text{ peach}$
 $= 6 \text{ boxes}$
 you need one more box to hold

$$\begin{array}{r} 5 \\ 4 \overline{) 21} \\ \underline{20} \\ 1 \end{array}$$

- ⑥ Each box contains 17 pencils. Vivian and Alice each has 1 box of pencils. How many pencils do they have altogether?

Number of pencils they have altogether:
 $17 \text{ pencils} + 17 \text{ pencils}$
 $= 34 \text{ pencils}$
 Number of pencils do they have altogether:

$$\begin{array}{r} 17 \\ + 17 \\ \hline 34 \end{array}$$

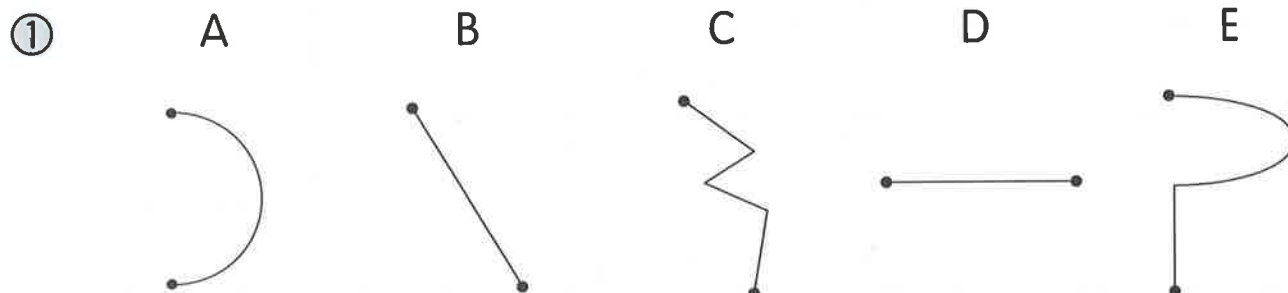
- ⑦ Simon and his 2 brothers share 17 pencils equally. At most how many pencils can each person get?

Number of pencils can each person get:
 $17 \div 3$
 $= 5 \text{ pencils} \dots 2 \text{ pencils}$
 at most
 Number of pencils can each person get at most:

$$\begin{array}{r} 5 \\ 3 \overline{) 17} \\ \underline{15} \\ 2 \end{array}$$

16 Line Segments and Quadrilaterals

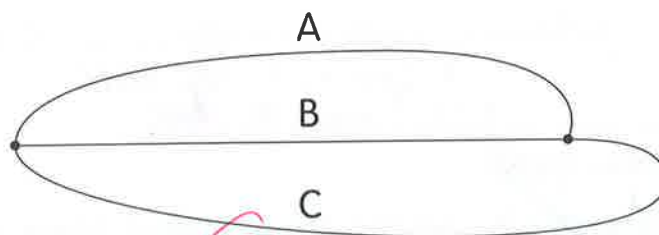
Write down all the letters for the answers.



Line segments are: B, D

Circle the answers.

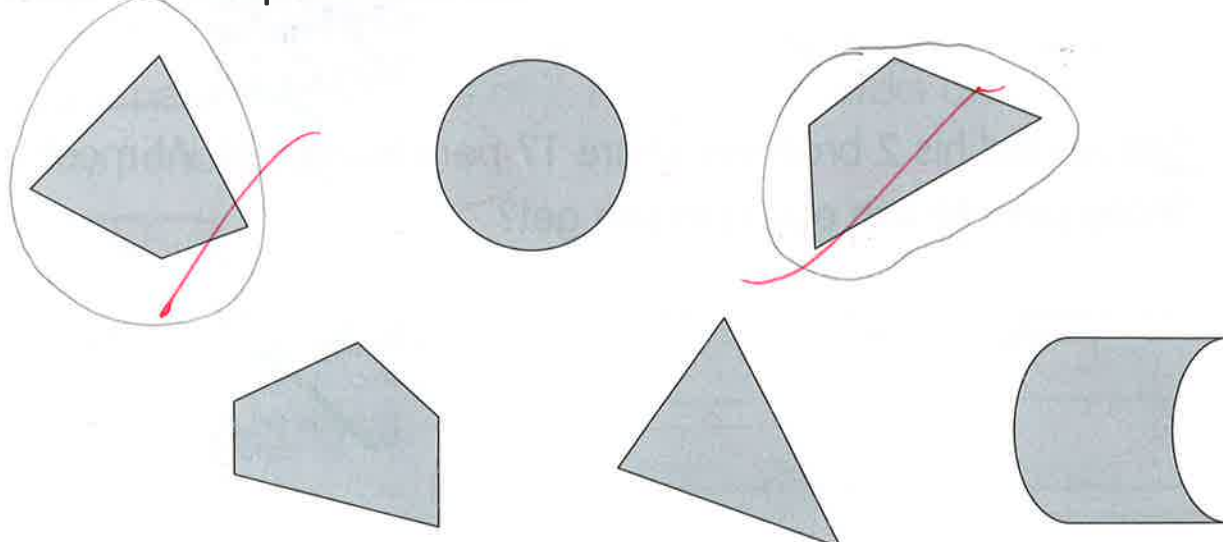
- ② Curves A, C and line segment B are joining the two points in the picture below.



(Curve A / Line segment B / Curve C) is the shortest.

(Curve A / Line segment B / Curve C) is the longest.

- ③ Circle all the quadrilaterals.



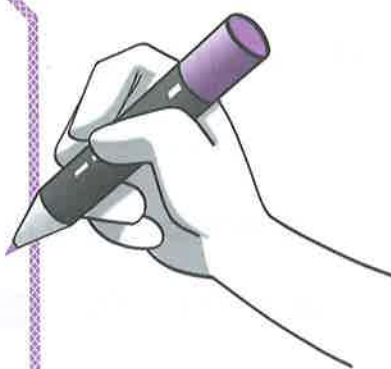
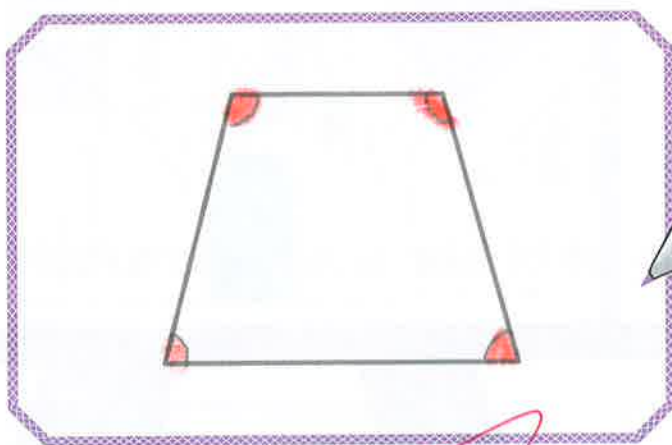
Fill in the blanks and circle the answers.

- ④ The part between two points on a straight line is called a line segment.
- ⑤ A quadrilateral is made up of 4 line segments.
- ⑥ A quadrilateral has 2 pairs of (opposite sides / adjacent sides) and 4 pairs of (opposite sides / adjacent sides).

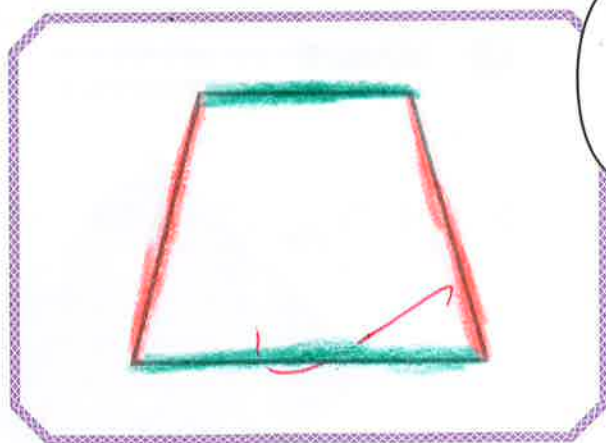


Let's draw and circle the answer.

- ⑦ Colour the angles of the quadrilateral below.



- ⑧ a Follow the instructions to colour the sides of the quadrilateral below.



Use one colour to colour one pair of opposite sides and another colour to colour another pair of opposite sides.



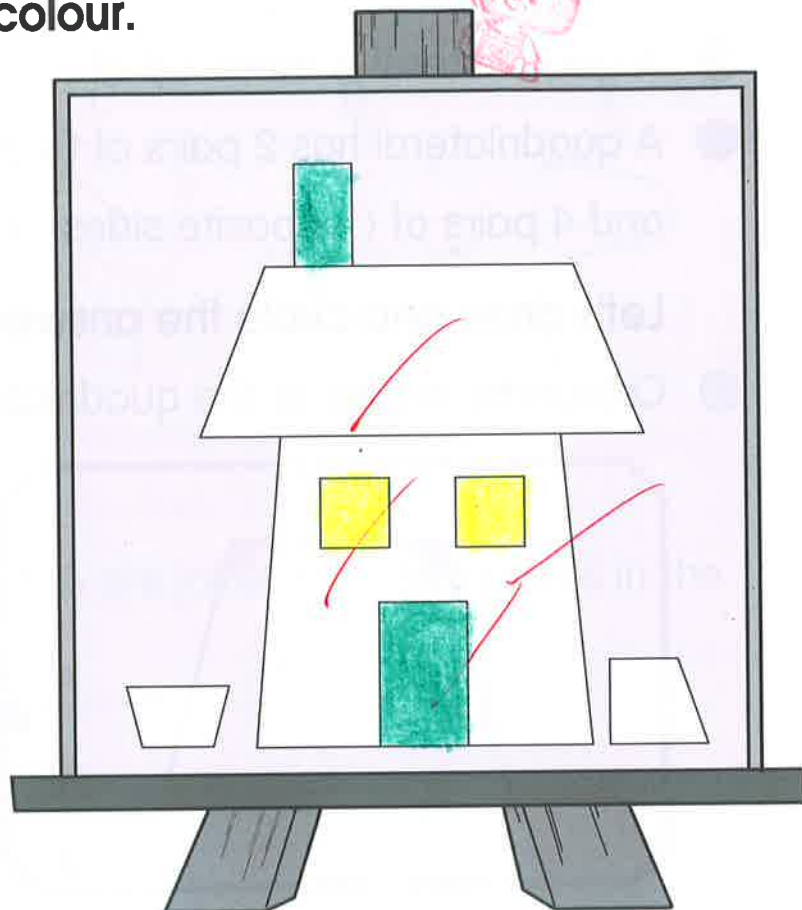
- b In the quadrilateral above, the pair of lines of different colours is a pair of (opposite sides / adjacent sides).



17 Squares and Rectangles

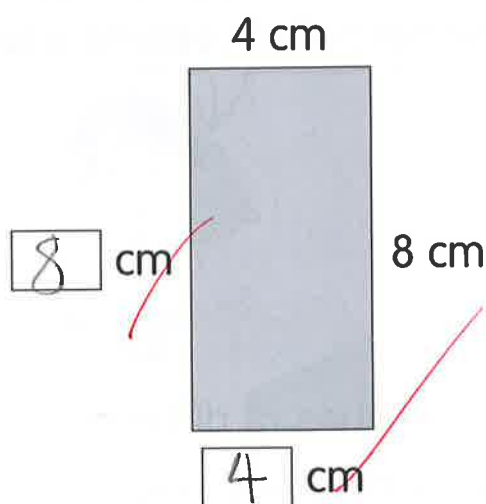
Follow the instructions to colour.

- ① Colour all squares yellow.
- ② In the remaining figures, colour all rectangles green.

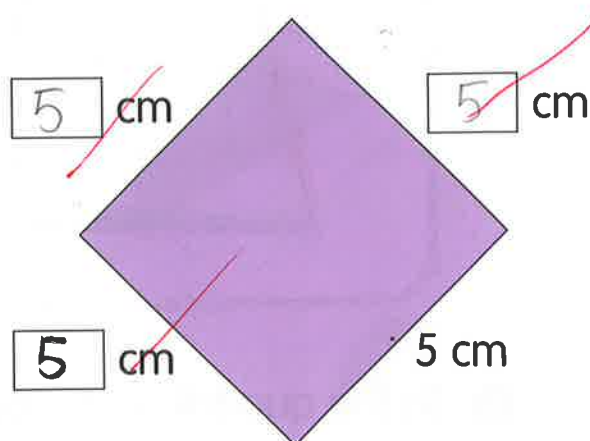


Write the unknown lengths.

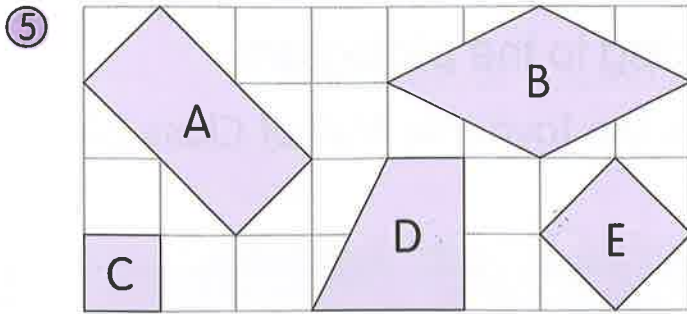
- ③ Rectangle



- ④ Square

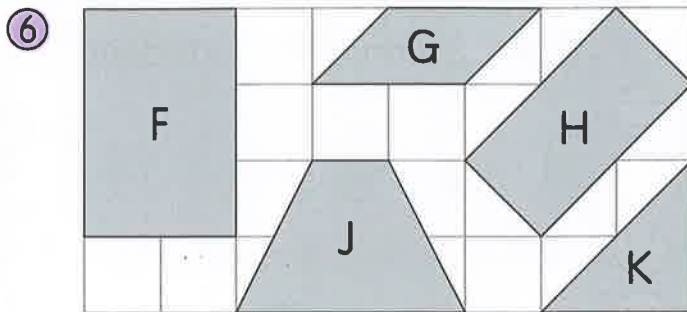


Observe the figures below, write down all the letters for the answers.



List all the squares:

C, E



List all the rectangles:

F, H

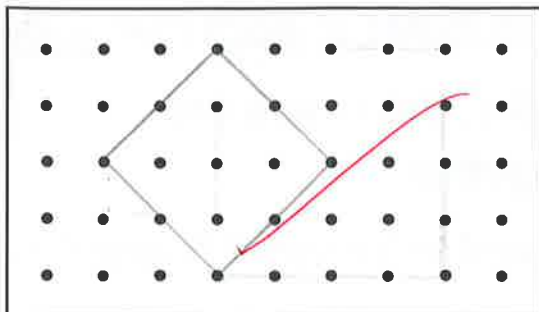
Blacken the circle next to the correct answer.

⑦ Which of the following sets of geo-strips can make a rectangle?

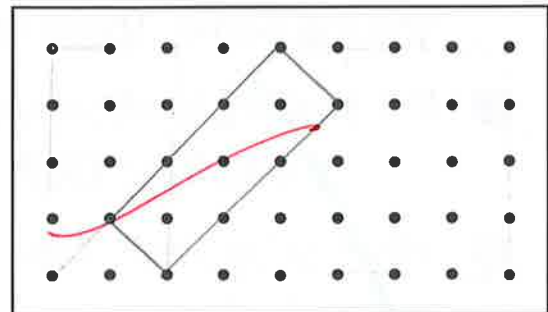


Follow the instructions to draw.

⑧ Square



⑨ Rectangle

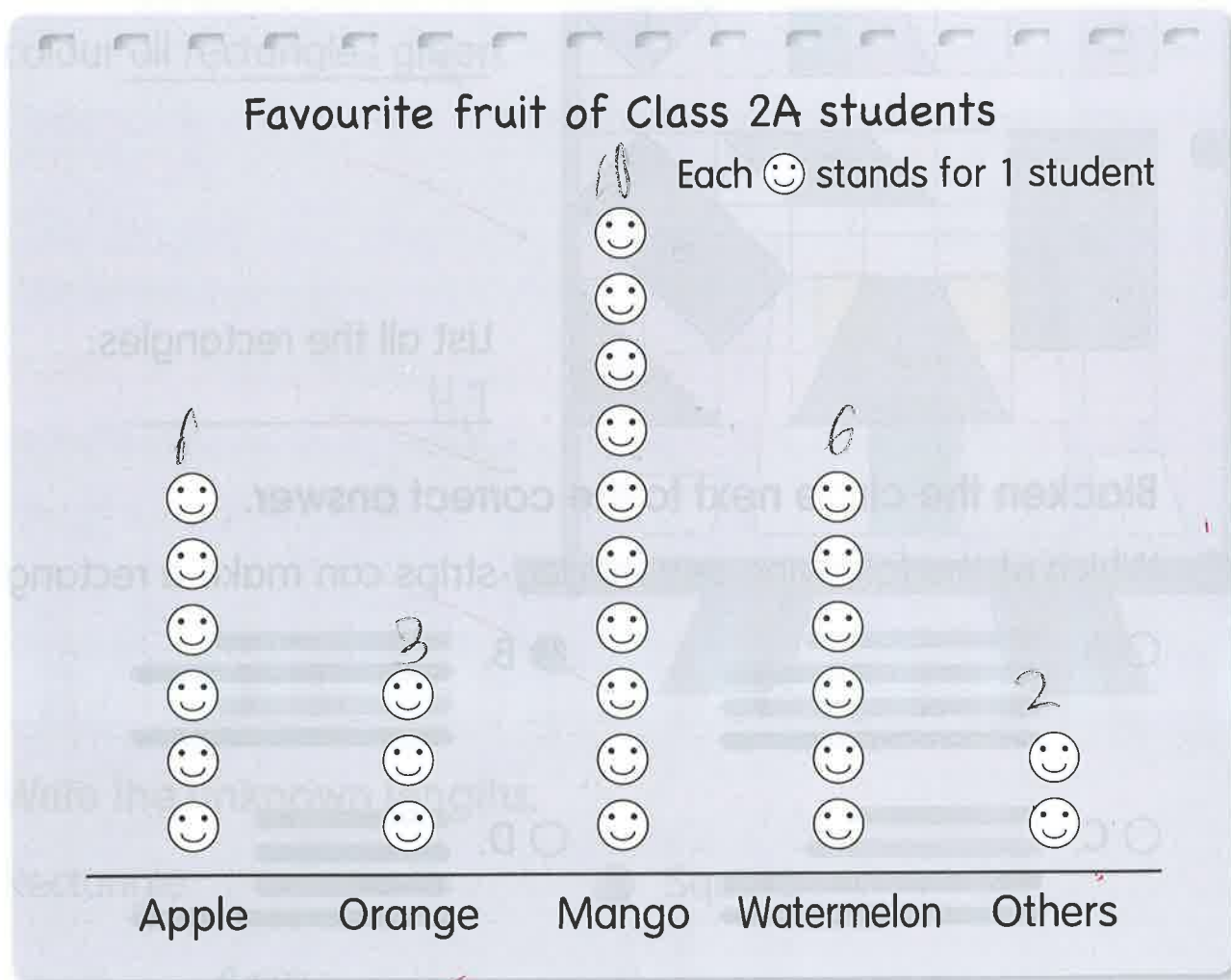


18 Knowing Pictograms

Bt ③

Answer the questions according to the pictogram.

- ① The following pictogram shows the favourite fruit of Class 2A students.

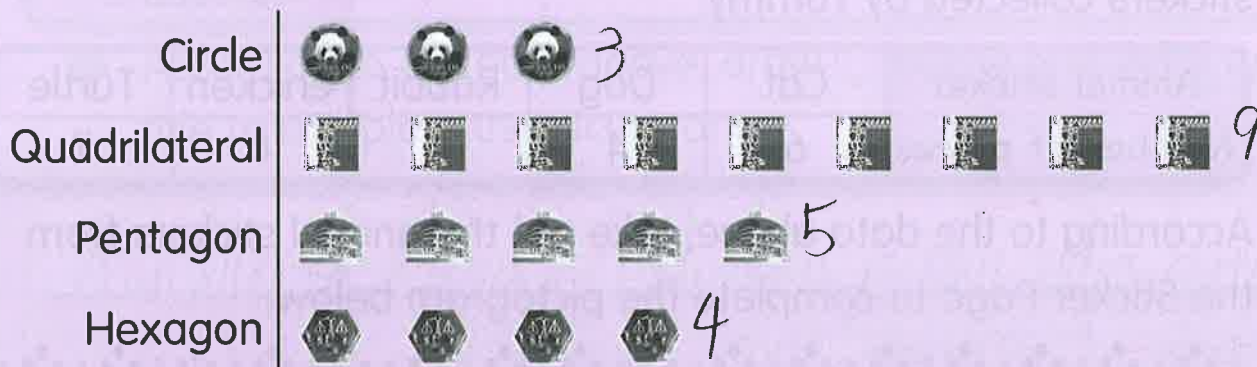


- a This is a (vertical / horizontal) pictogram.
- b The numbers of students who like apples and watermelons are the same. There are 6 students of each fruit. watermelons
- c If 1 student is absent on that day, then there are 27 students in Class 2A altogether.
- d What other fruits may be included in 'Others'? Suggest one example. Answer: peaches

- ② The following pictogram shows the number of stamps of different shapes in the stamp album.

Number of stamps of different shapes

Each picture stands for 1 stamp



- (a) This is a (vertical / horizontal) pictogram.
 (b) There are ~~5~~ pentagonal stamps and hexagonal stamps altogether. 9
 (c) There are 4 (more / fewer) pentagonal stamps than quadrilateral stamps.
 (d) The greatest number of stamps is ~~6~~ more than the smallest number of stamps.
 (e) There are 21 stamps in the stamp album altogether.





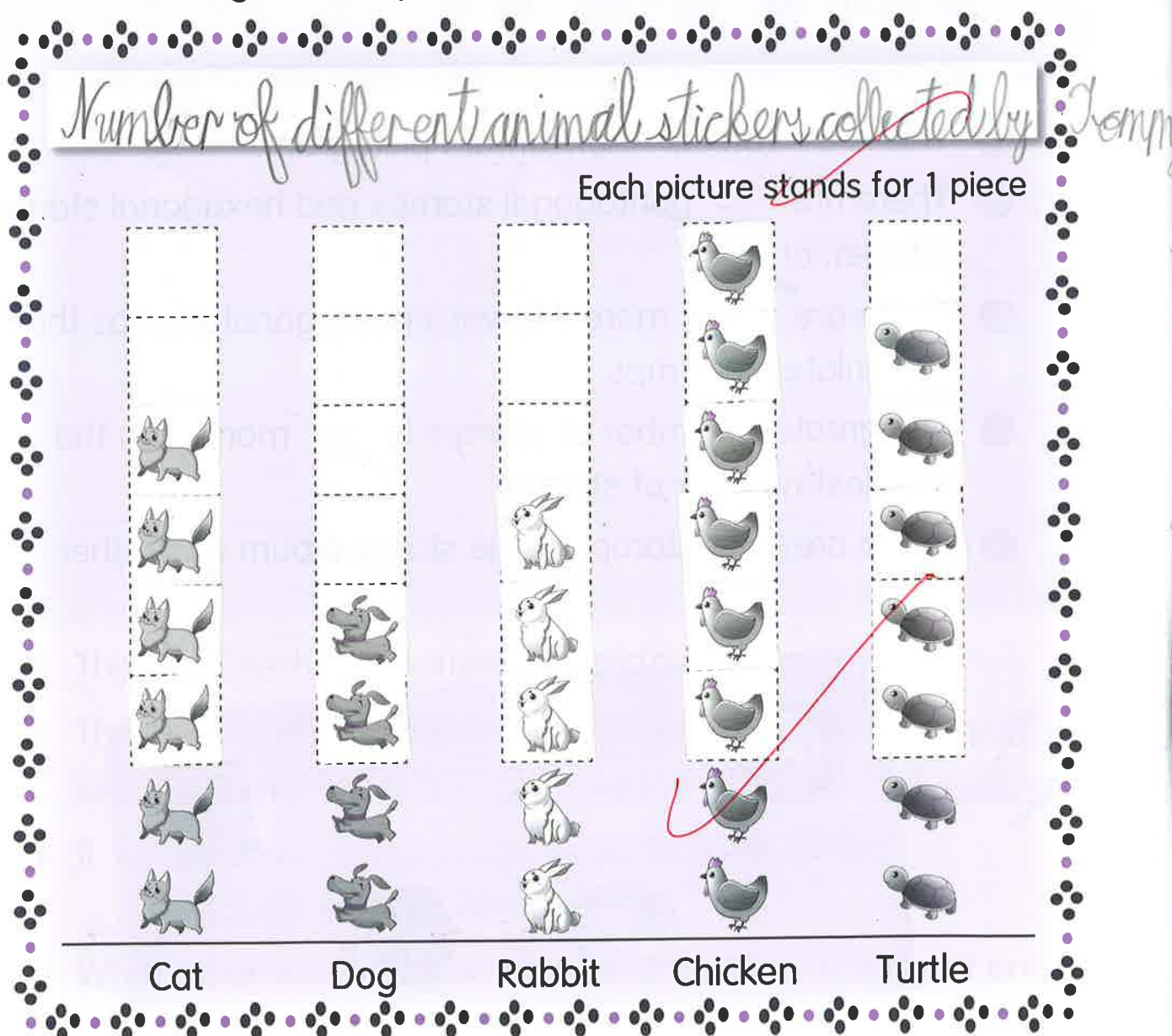
19 Making Pictograms

Follow the instructions and answer the questions.

- ① The following table records the number of different animal stickers collected by Tommy.

| Animal sticker | Cat | Dog | Rabbit | Chicken | Turtle |
|------------------|-----|-----|--------|---------|--------|
| Number of pieces | 6 | 4 | 5 | 8 | 7 |

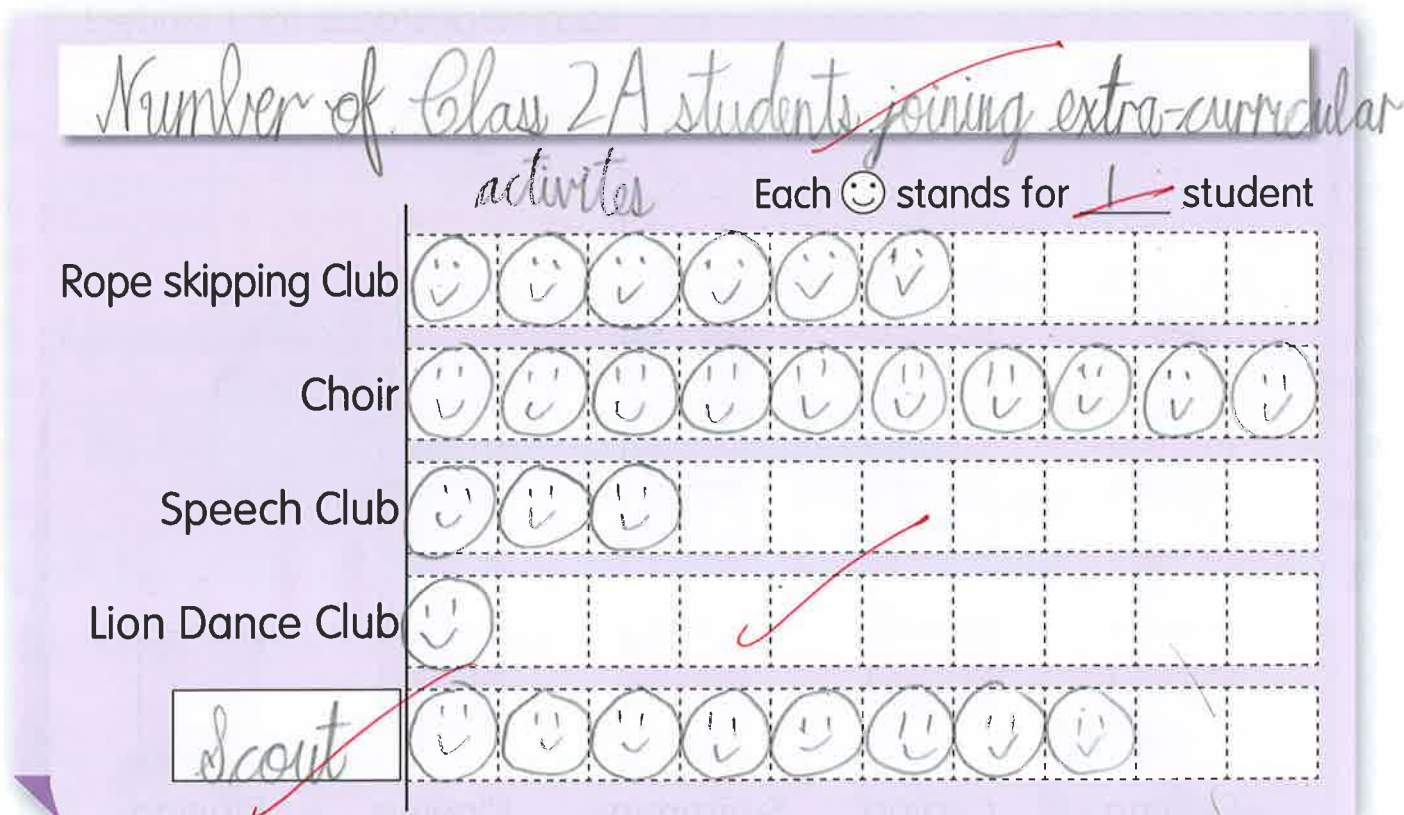
According to the data above, take out the animal stickers from the Sticker Page to complete the pictogram below.



- ② The following table records the number of Class 2A students joining extra-curricular activities.

| Extra-curricular activity | Rope skipping Club | Choir | Speech Club | Lion Dance Club | Scout |
|---------------------------|--------------------|-------|-------------|-----------------|-------|
| Number of students | 6 | 10 | 3 | 1 | 8 |

- Ⓐ According to the data above, draw ☺ below and write the title to complete the pictogram.



- Ⓑ This is a (horizontal / vertical) pictogram.
- Ⓒ The most students join choir.
- There are 10 students.
- Ⓓ There are 3 fewer students joining the Speech Club than the (Rope skipping Club / Choir / Lion Dance Club / Scout).
- Ⓔ If one student leaves the Scout and then he joins the Rope skipping Club, then the numbers of students joining these two clubs will be (the same / different).

Date: 31st May, 2022

Score: A (1)

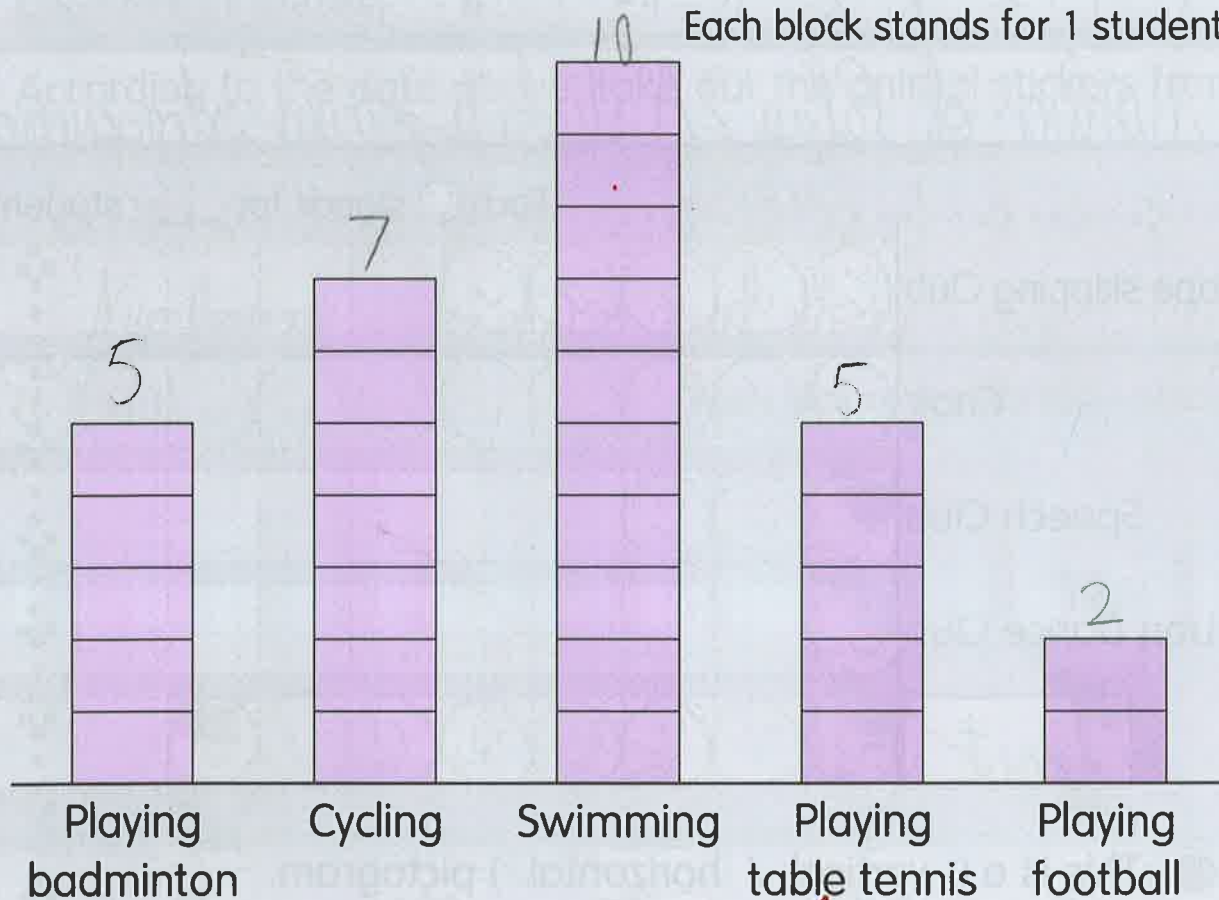
20 Block Charts

Answer the questions according to the block chart.

A teacher collected data on the favourite sport of Class 2B students and made the following block chart.

Favourite sport of Class 2B students

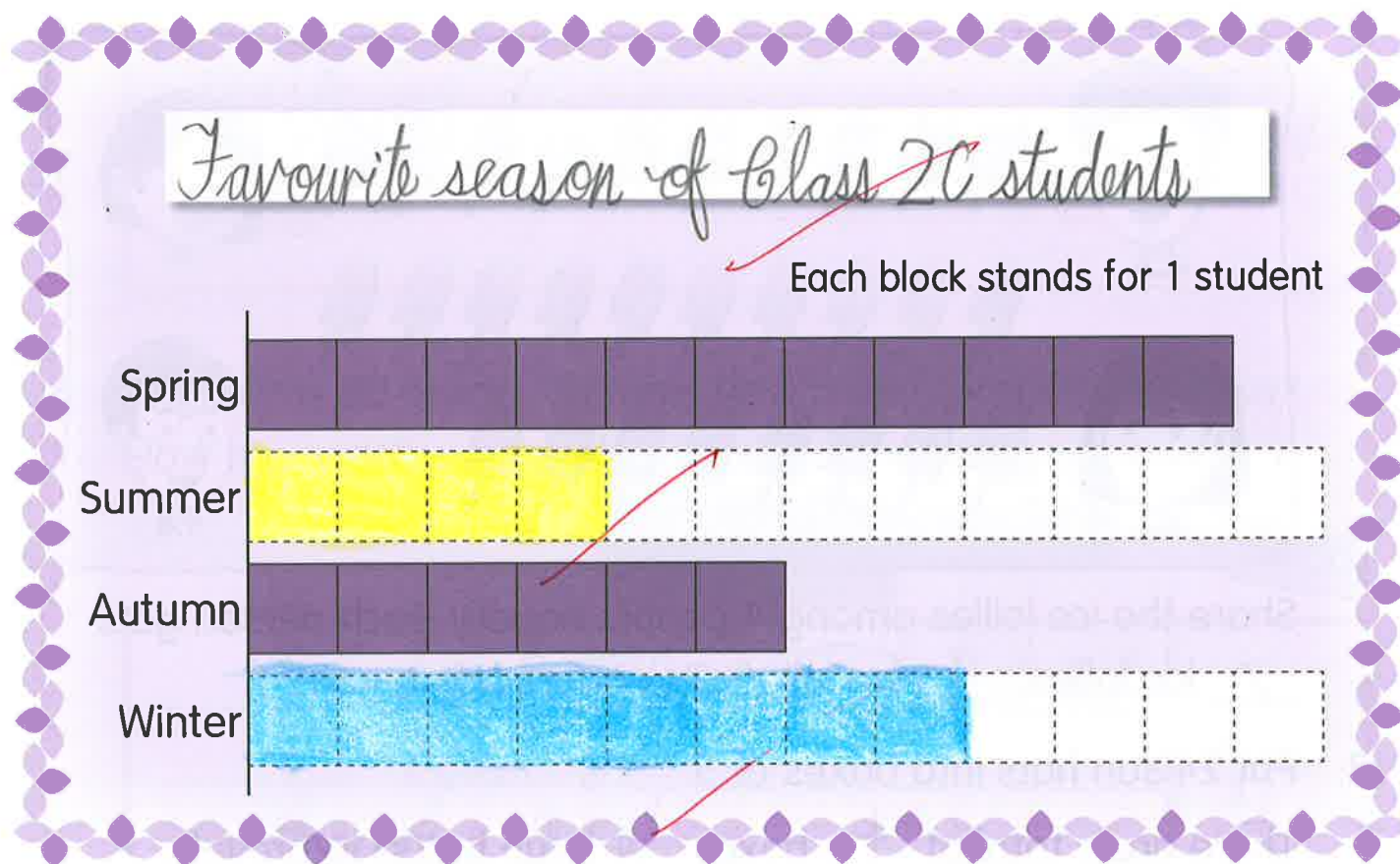
Each block stands for 1 student



- ① The most popular sport is swimming. There are 10 students.
- ② The numbers of students who like Playing badminton and Playing table tennis are the same. There are 5 students for each sport.
- ③ There are 5 (more / fewer) students who like cycling than those who like playing football.

Follow the instructions to complete the block chart below.

A teacher collected data on the favourite season of Class 2C students.



④ Write a title for the block chart.

⑤



There are 2 fewer students who like summer than those who like autumn.

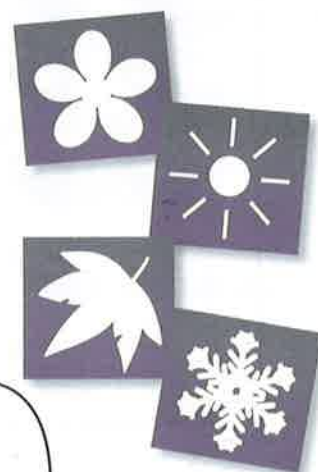
Colour the boxes that stand for 'Summer'.

⑥

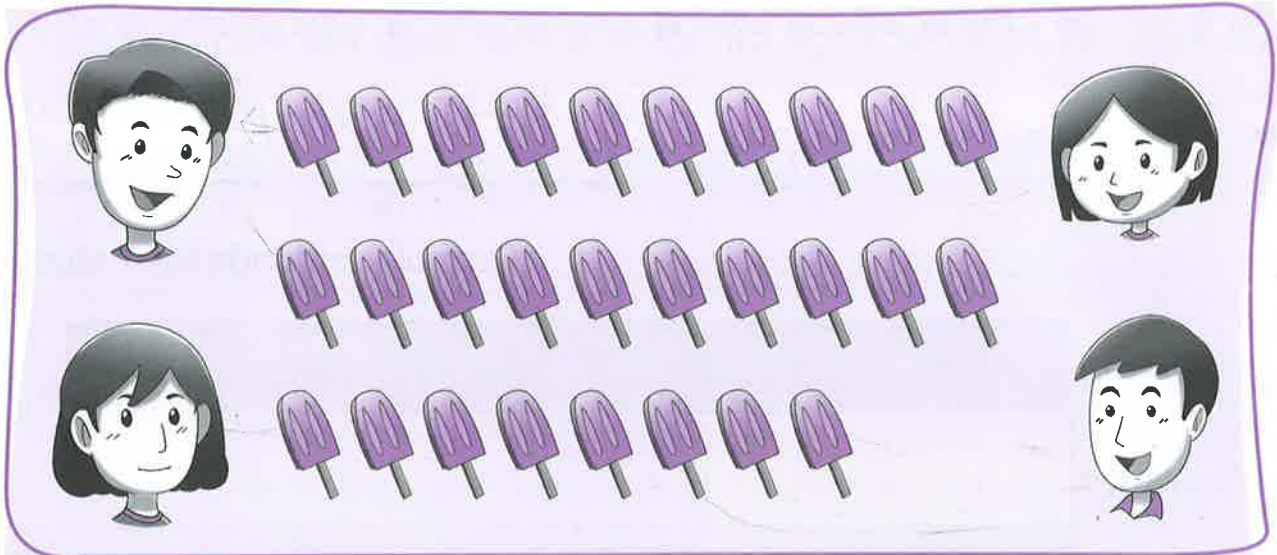


The most students like spring. The difference between the numbers of students who like spring and winter is 3.

Colour the boxes that stand for 'Winter'.



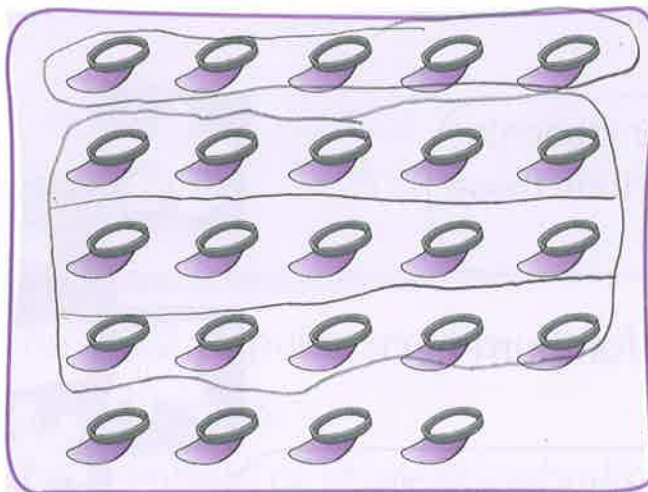
1. There are 28 ice lollies.



Share the ice lollies among 4 people equally. Each person gets 7 ice lollies. 0 ice lolly/lollies is/are left. (1 mark) ✓

2. Put 24 sun hats into boxes of 5.

There are a total of 4 boxes. 4 sun hat(s) is/are left.



Horizontal form:

$$24 \div 5 = 4 \text{ ... } 4$$

Column form:

$$\begin{array}{r} 4 \\ 5 \overline{)24} \\ \underline{20} \\ 4 \end{array}$$

(1 mark)

3. $27 \div 9 = \boxed{3}$ (1 mark) ✓

4. $51 \div 7 = \boxed{7 \text{ ... } 2}$ (1 mark) ✓

remainder

5. Put 48 belts on 8 hooks equally. How many belts does each hook hold? (Show your working) (3 marks)

| | |
|---------------------------------|--|
| Number of belts each hook hold: | |
| 48 belts \div 8 ✓ | |
| = <u>6 belts</u> ✓ | $\begin{array}{r} 8 \overline{)48} \\ 48 \\ \hline 0 \end{array} \checkmark$ |

6. Angus has 50 dollars. At most how many combs can he buy? How many dollars are left? (Show your working) (3 marks)



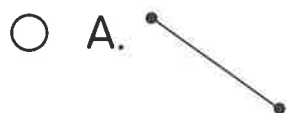
\$6.00

| | |
|-------------------------------------|--|
| Number of combs he can buy at most: | |
| (50 \div 6) combs ✓ | |
| = <u>8 combs ... \$2</u> ✓ | $\begin{array}{r} 8 \\ 6 \overline{)50} \\ 48 \\ \hline 2 \end{array}$ |

7. Each box can hold 3 cups. Now there are 28 cups. If all the cups are put into boxes, at least how many boxes are needed? (Show your working) (3 marks)

| | |
|-------------------------------|--|
| Number of least boxes needed: | |
| 28 \div 3) boxes ✓ | |
| = 9 boxes ... 1 cup ✓ | |
| = <u>10 boxes</u> ✓ | $\begin{array}{r} 9 \\ 3 \overline{)28} \\ 27 \\ \hline 1 \end{array}$ |

8. Which of the following is not a line segment? (1 mark) ✓

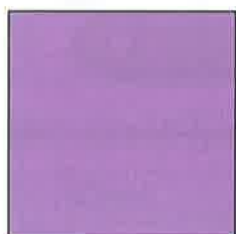


9. A quadrilateral has 4 sides and 4 angles. (1 mark) ✓

10. Write the names for the following quadrilaterals.

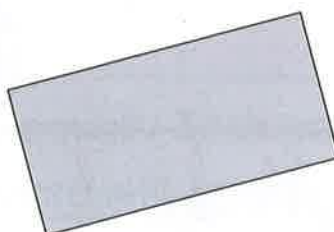
(2 marks, 1 mark for each correct answer)

(a)



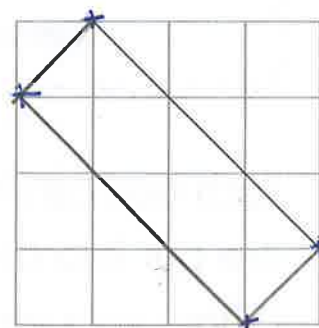
Answer: square ✓

(b)

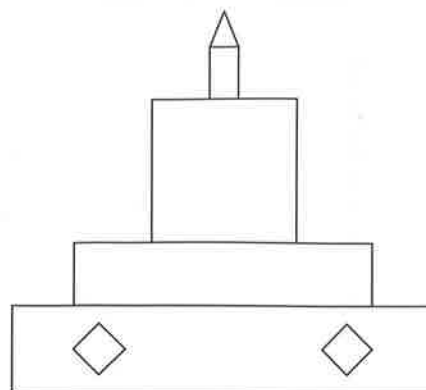


Answer: rectangle ✓

11. Add 3 line segments to the figure on the right to form a rectangle with the original line segment. (1 mark)



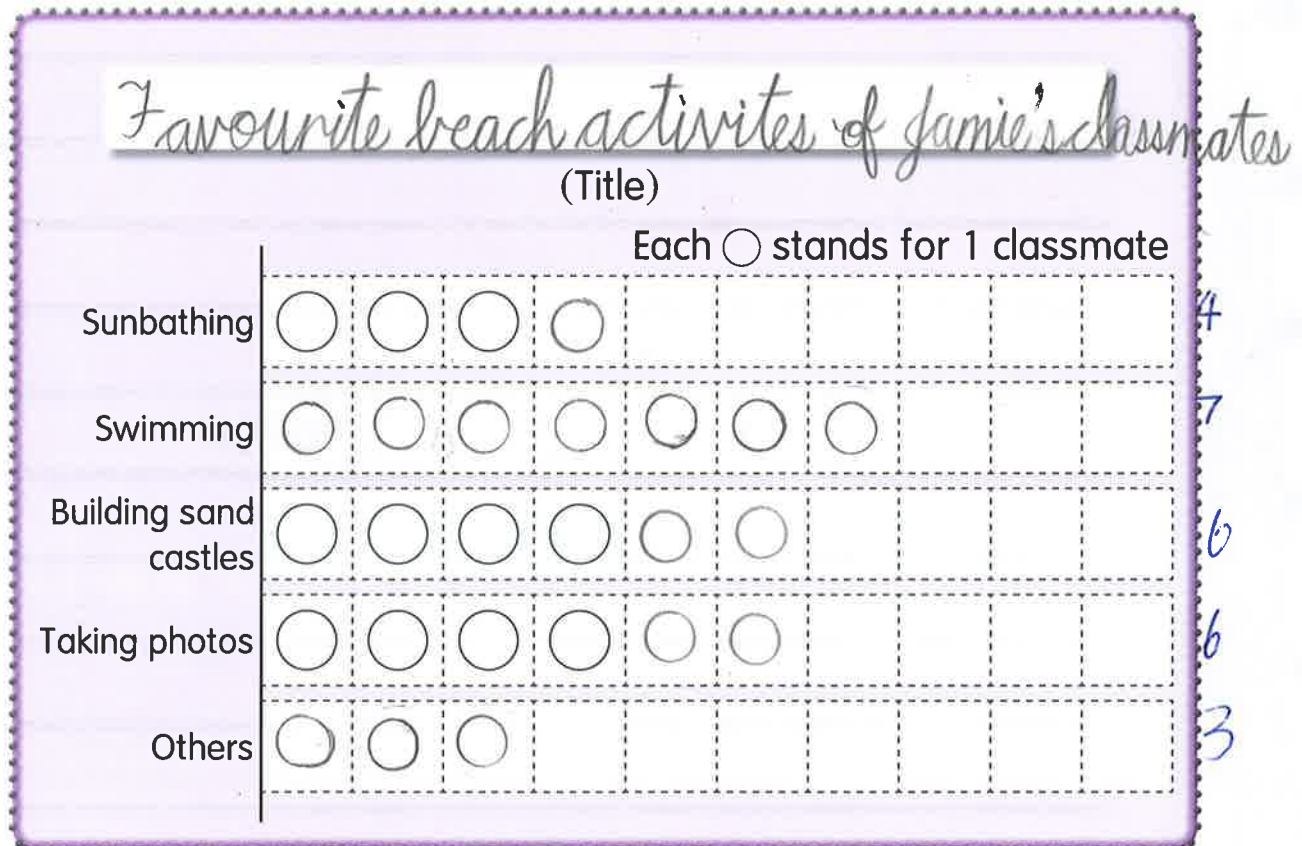
12. There are 3 squares in the picture on the right. (1 mark)



13. Jamie collected data on the favourite beach activities of his classmates. The result is as follows:

| Activity | Sunbathing | Swimming | Building sand castles | Taking photos | Others |
|----------------------|------------|----------|-----------------------|---------------|--------|
| Number of classmates | 4 | 7 | 6 | 6 | 3 |

- (a) According to the data above, draw '○' below. Write a title and complete the pictogram. (2 marks)



- (b) Jamie has interviewed 26 classmates. (1 mark)
- (c) There are 2 * more / fewer classmates who like taking photos than those who like sunbathing. (1 mark)
- (* Circle the answer)
- (d) The activity Jamie like most is collecting sea shells.
According to the above pictogram, which item does this activity belong to? (1 mark)

Answer: This activity belongs to 'Jamie's classmates'. X