SUMMER HOLIDAY MATHS PACK!

Along with the Summer Holiday Maths Pack, I would suggest that your daughter tries to complete at least one of these times tables drills 5 times a week, once a day.

It is essential that the girls build up their speed of recall.

Within class we have been timing ourselves each day when we carry out the test. It would be a good idea if they continued to do this. Each girl knows how long they take to do the test. If they find they are completing the test easily within their time – hopefully this will happen with the practise- they take 10 seconds off their time.

http://www.timestables.me.uk/printable-pdf-quiz-generator.htm

Another great resource is Mathletics and I would encourage the girls to work through as many of the activities as possible. They can then play Live – which they all enjoy!

Exercise 1

Keep your maths brain active by answering these 10 really quick questions and completing the Activities which you can find on EducationCity!

1 Round 3,755 to the nearest hundred.

_____

2 What year is MMXIV?

_____

3 The temperature in Iceland is − 2 °C. If the temperature rises by 12 °C, what will be the new temperature?

_____

4 Calculate 1,234 + 4,566

_____

5 Calculate 2,300 − 1,289

_____

6 Which of these fractions are equivalent to $\frac{2}{3}$?

$\frac{4}{6}$ $\frac{16}{48}$ $\frac{20}{30}$ $\frac{8}{6}$ $\frac{10}{3}$ $\frac{8000}{12000}$
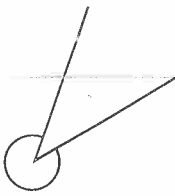
7 Put these numbers in order from smallest to largest.

1.23   1.203   2.23   12.203   1.023

_____

8 Manu is watching a film at the cinema. It is 1 hour and 50 minutes long. If the film started at 6:27PM, what time will it finish?

_____

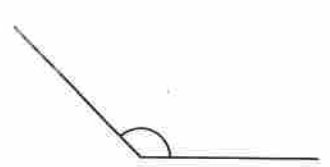**9** Label the angles as **acute**, **obtuse** and **reflex**.

ⓐ

_____

ⓑ

_____

ⓒ

_____

ⓓ

_____

ⓔ

_____

ⓕ

_____

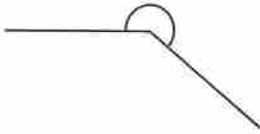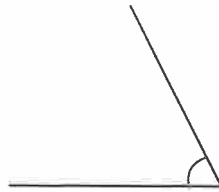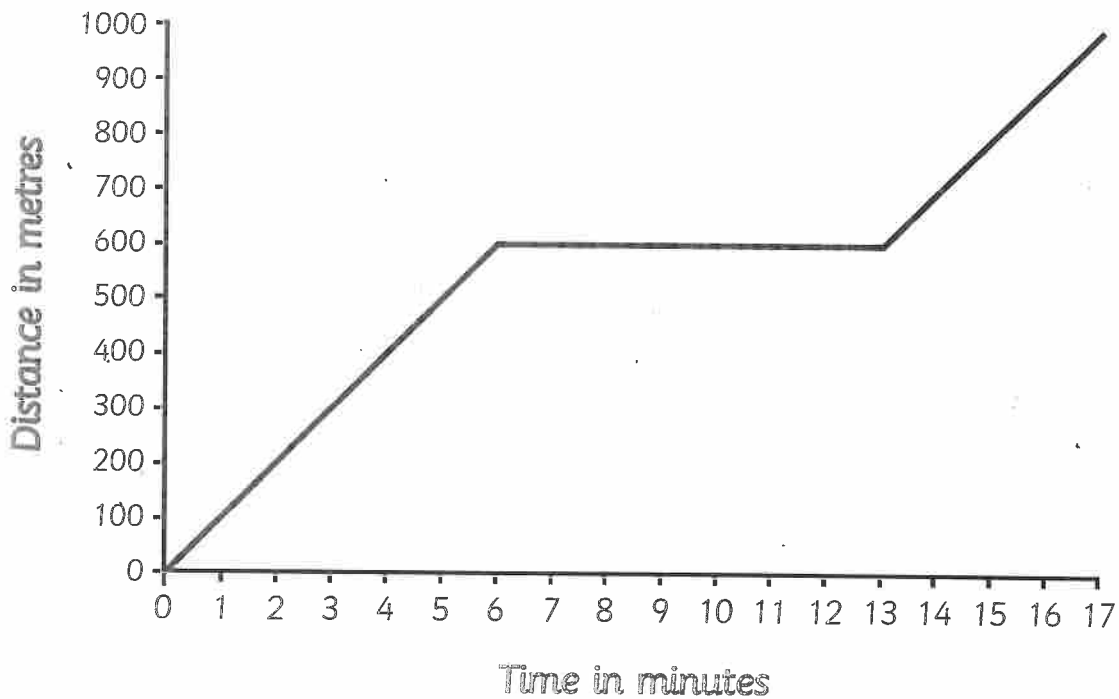**10** This graph shows Manu's journey to school. He stops at the shop on the way to school. **How long did Manu spend at the shop?**

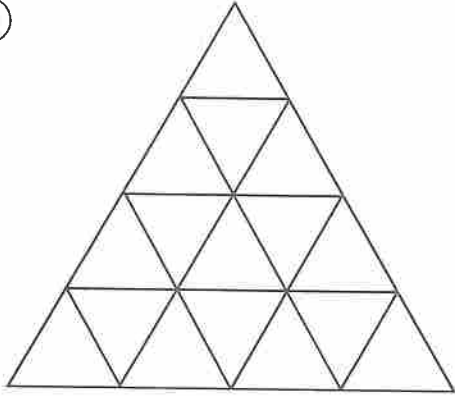How about a perplexing puzzle to test your knowledge of 2D shapes?

1 How many triangles and rectangles are in these pictures?

(a)

_____

(b)

_____
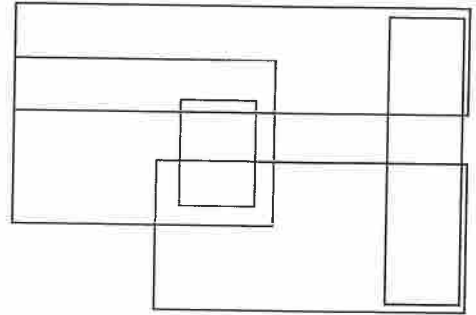
Can you make your own picture like this?

(c)

Now play Mathletics!

Exercise 3

1. Manu has £15.23. He gives Klara £2.34. **How much money does Manu have left?**

   _____

2. What is the lowest common multiple of 2, 3 and 4?

   _____

3. Which of these numbers are prime numbers? 7, 9, 13, 15 and 19

   _____

4. Calculate 2,343 x 23

   _____

5. Put these fractions in order from largest to smallest.

   $\dfrac{4}{5}$ $\qquad$ $\dfrac{1}{2}$ $\qquad$ $\dfrac{7}{10}$ $\qquad$ $\dfrac{1}{4}$ $\qquad$ $\dfrac{3}{20}$

   _____

6. Convert $\dfrac{16}{5}$ to a mixed number

   _____

7. What is **25%** as a fraction and decimal?

   _____

8. Translate this shape 2 spaces to the right and 6 spaces up. Draw the new shape.
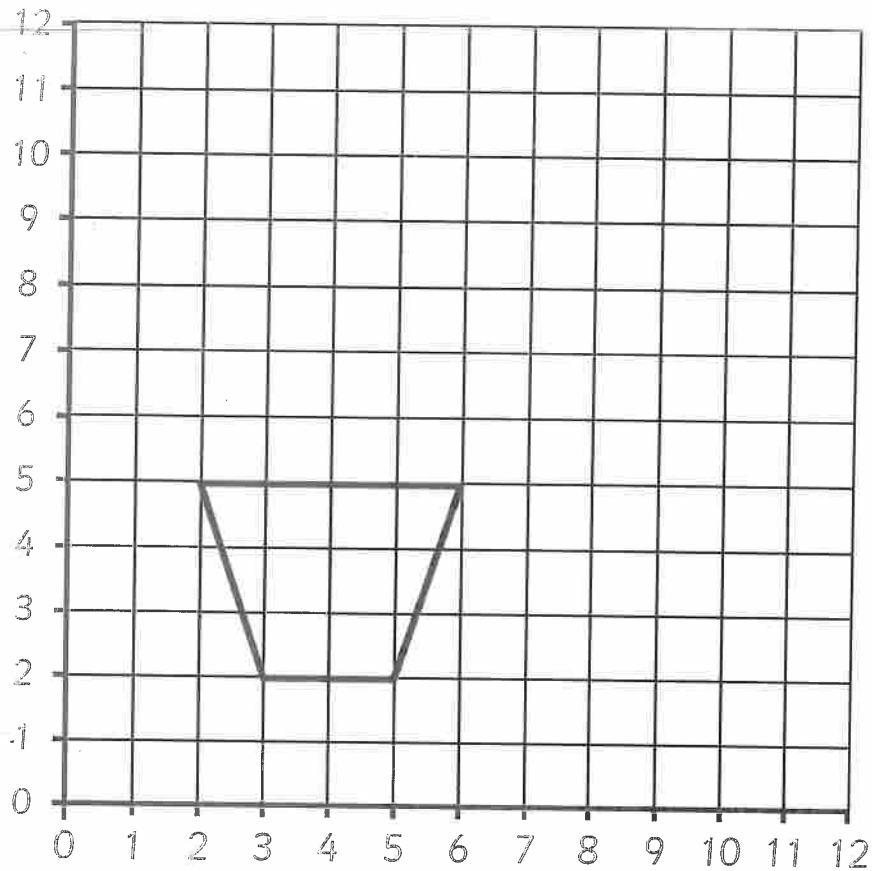
9. What is the number XCIX?

_____

10. If the Moon is 384,400km away from the Earth, how far would an astronaut travel if he flew to the Moon and back to Earth again?

_____

Have a go at another perplexing 2D shape puzzle!

1 Which of these nets will make a cube? Can you find any other nets that will make a cube? There are 4 in total.

a

b

c

d

e

f

g

Mathletics — shapes activities + live play

Exercise 5

1 How many **grams** are equivalent to **2.8kg**?
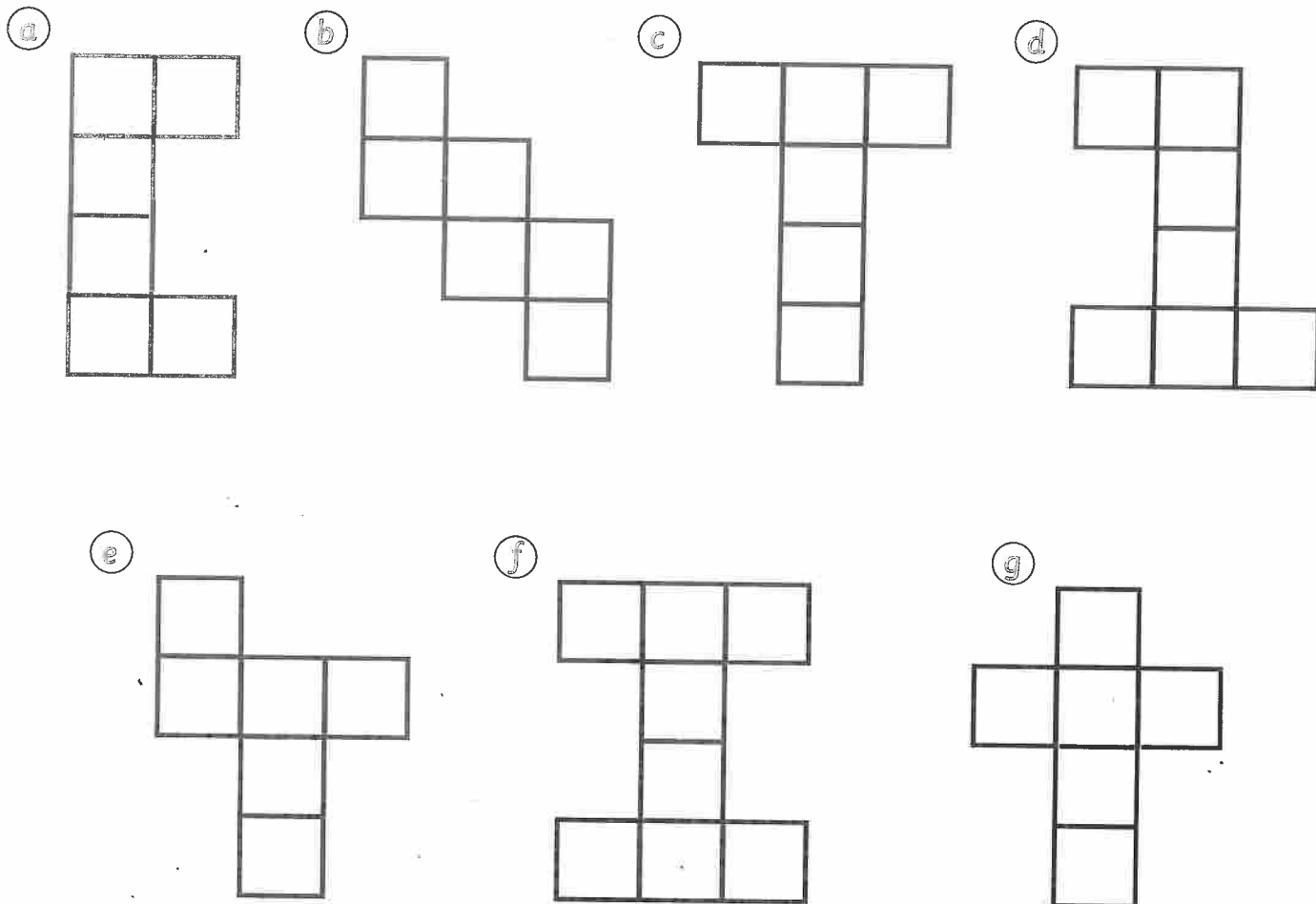
_____

2 What year is **MM**?

_____

3 Write these numbers in order from largest to smallest:

102,034   10,234   123,034   12,340   100,334.

_____

4 What is **10 less** than **-5**?

_____

5 Calculate **563,563 + 563**.

_____

6 Convert $1\frac{2}{5}$ to an improper fraction.

_____

7 . What is $\frac{1}{5}$ as a percentage and decimal?

_____

8 Look at the triangle.
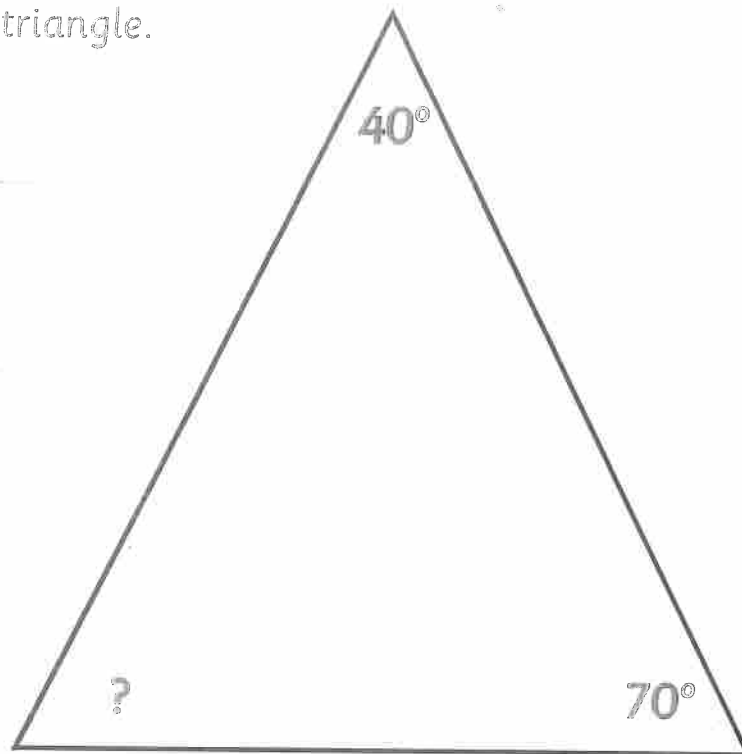
What is the size of the missing angle?

_____

9 Round **34,526** to the nearest thousand.

_____

10 Granny wants to buy a new house. It costs £**175,950**. Granny has £**103,250** in savings. How much money will Granny need to borrow from the bank to buy the house?

_____

Exercise 6

1 Can you continue the sequence?

(a) 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, [ ]

Do you know who discovered this sequence?

(b) _____

Now look at Mathletics → number sequences.
Live play

Exercise 7

Another 10 quick questions and 2 more EducationCity Activities, to keep you on your maths toes!

1 Calculate 200,000 – 299.

_____

2 What is £9.31 - £3.67?

_____

3 What is 4,746 divided by 7?

_____

4 What is 27,648 divided by 8?

_____

5 What is 2,345 multiplied by 23?

_____

6 If the temperature in Spain is 28°C and the temperature in Iceland is -12°C, what is the difference in the temperature between the two countries?

_____

**7** What is the number CDLII?

_____

8 What is 100 less than 98,354?

_____

9 Convert $\frac{18}{4}$ to a mixed number.

---

10 A rectangle has sides of **33 cm** and **1.5 m**. What is its perimeter in metres?

Exercise 8

Perplexing Puzzle: How about a number-based one?

1 Place the numbers 1 to 9 inside the boxes so that all the lines passing throughout the centre square always add up to make the same number. Can you find more than one solution to this puzzle? What is the rule?
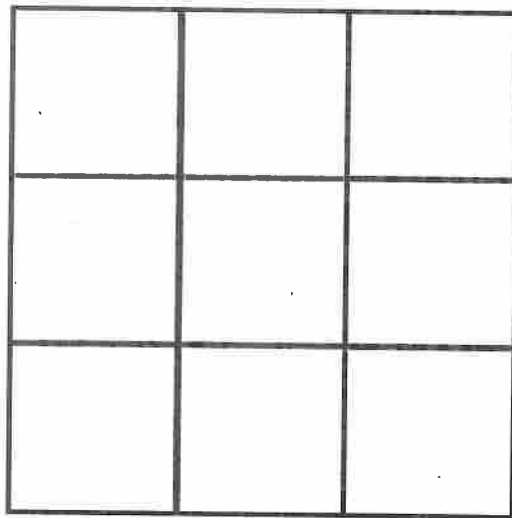
Exercise 9

PLAYLIVE:

My best PlayLive Maths score this week is

Exercise 10

1 Divide 2,365 by 6, giving the remainder as a number.

_____

2 Write all of the square numbers which are **below 30**.

_____

3 What is 3,560,700 divided by 100?

_____

4 Multiply 63 by 1,000.

_____

5 Complete the calculation by filling in the boxes with two suitable numbers:

$\boxed{} \times 7 = 56 \div \boxed{}$

6. What is the number CMXCIX?

_____

7. What is ten more than 134,566?

_____

8. Convert $4\frac{5}{7}$ to an improper fraction.
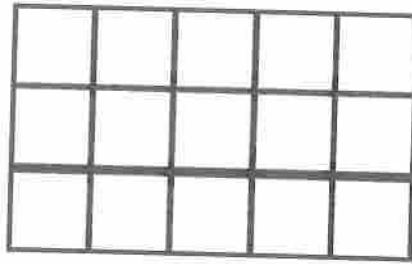
_____

9. Calculate $\frac{2}{3} + \frac{3}{6}$.

_____

10. A rectangle has sides of 4 cm and 53mm. What is its area in cm^2?
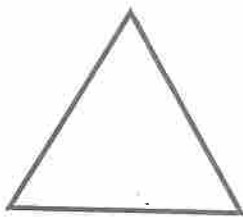
_____

Exercise 11

1 If a repeated shape fits together, without any gaps or overlaps, we say that it **tessellates**.
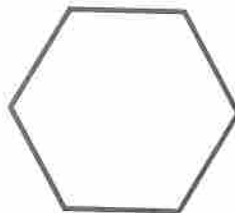
Squares Tessellate

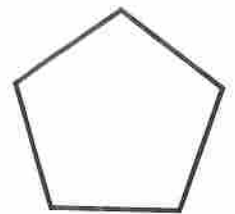(a) Which of these regular shapes will tessellate?

Equilateral Triangle

Hexagon

Pentagon

(b) 'Can you find any examples of tessellating patterns in your home?

Exercise 12

PLAYLIVE:

My best PlayLive Maths score this week is

Exercise 13

These are the last 10 quick questions and EducationCity Activities for you before you start Year 6 with a super sharp, maths-whiz mind!

1 What year is MLXVI?

_____

2 Round 134,568 to the nearest 10,000.

_____

3 What is 25 more than -28?

_____

4 What is the sum of 567 and 345,343?

_____

5 What is the difference between 2,956 and 987,354?

_____

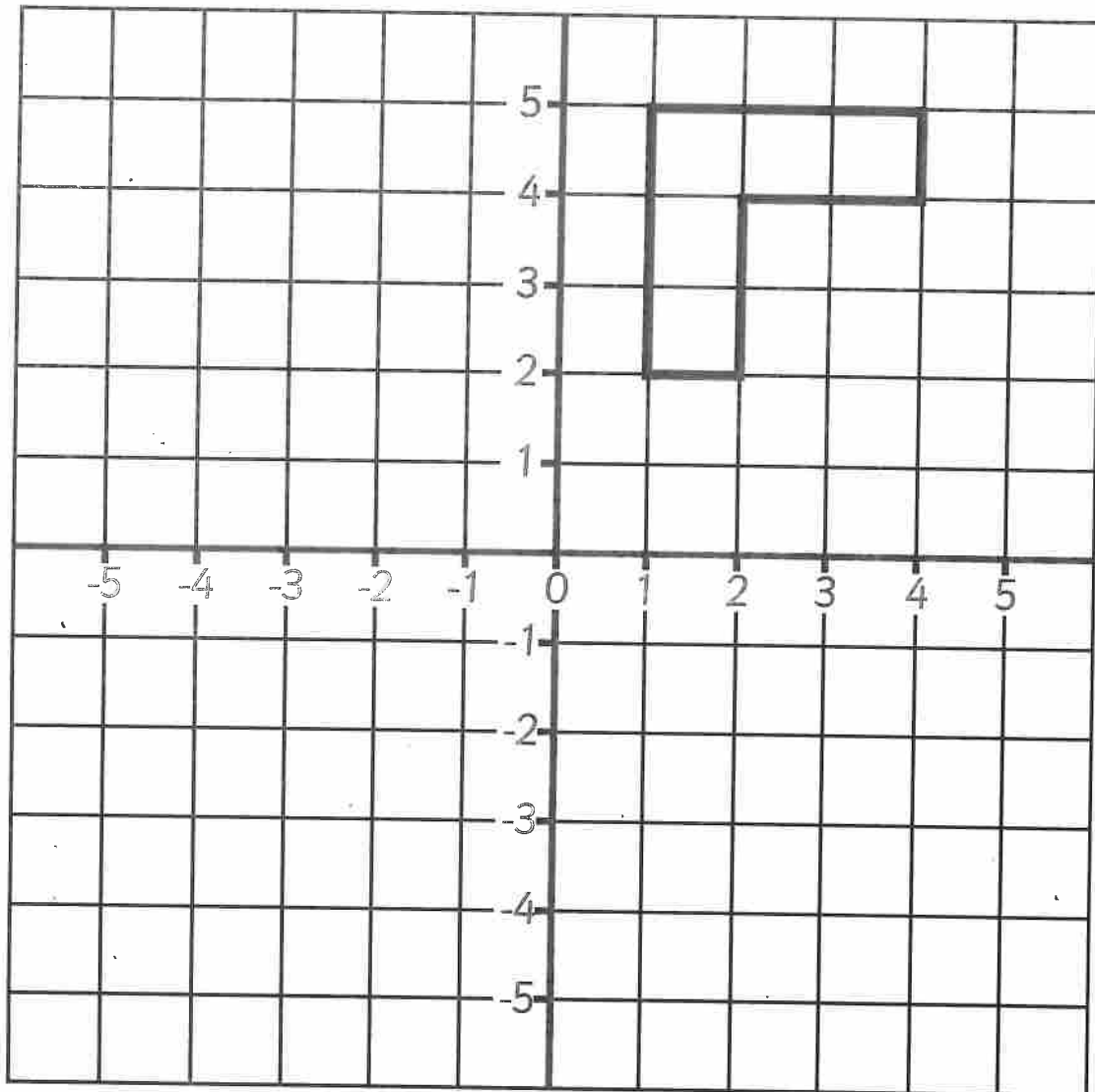**6** Manu earns £19.23 for doing his paper round. If he already has savings of £83.67, how much money does Manu have altogether?

_____

7 Convert $1\frac{3}{5}$ to an improper fraction.

_____

8 Calculate $\frac{4}{5} - \frac{7}{25}$

_____

9 If Klara wakes up at **8:34 am** and goes to bed at **9:56 pm**, how long has Klara been awake?

**8** Reflect this shape in the **y axis**.

Exercise 14

The last perplexing puzzle! Give it a go!

1 Manu, Stig, Klara, Emma, Meg and Chip are going out for dinner. They are arguing about where they should sit around the table.

- Manu has sat down and says that he will only sit next to Klara.
- Klara says that she won't sit next to Stig.
- Stig says that he won't sit next to Meg or Emma.
- Meg says that she will only sit next to Chip.
- Chip says that he doesn't mind where he sits as long as he gets his dinner.

Write a table plan for the EducationCity characters, to stop them arguing.

(a) ___Manu___   (d) _____

(b) _____   (e) _____

(c) _____   (f) _____
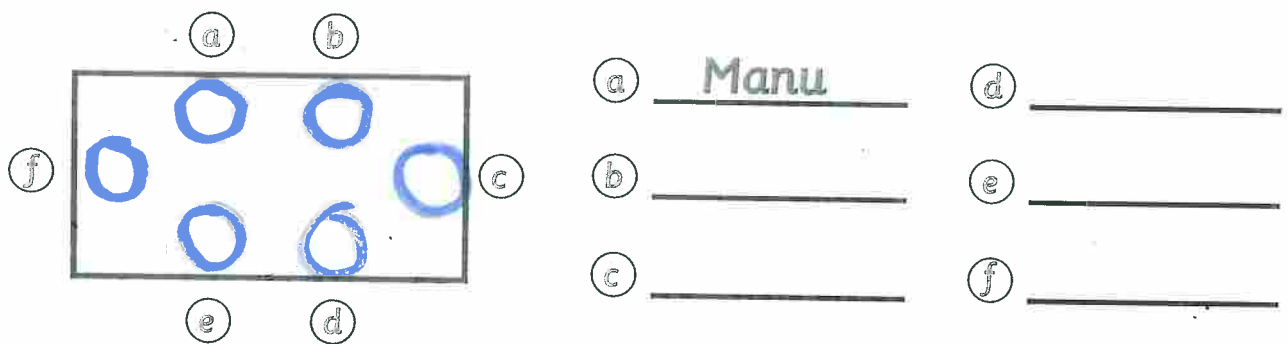
Try to find some area + perimeter problems on mathletics.

Exercise 15

PLAYLIVE:

My best PlayLive Maths score this week is

_____

- Exercise 1
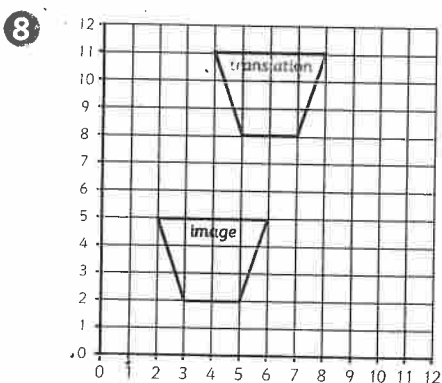
1. 3,800
2. 2014
3. 10°C
4. 5,800
5. 1,011
6. $\frac{4}{6}$ $\frac{20}{30}$ $\frac{8000}{12000}$
7. 1.023   1.203   1.23   2.23   12.203
8. 8:17 pm
9. a) reflex, b) acute, c) obtuse, d) reflex, e) acute, f) obtuse
10. 7 minutes

- Exercise 2

1. a) 27 triangles b) 26 rectangles

- Exercise 3

1. £12.89
2. 12
3. 7, 13; 19
4. 53,889
5. $\frac{4}{5}$ $\frac{7}{10}$ $\frac{1}{2}$ $\frac{1}{4}$ $\frac{3}{20}$
6. $3\frac{1}{5}$
7. $\frac{1}{4}$ and 0.25
8.

9. 99
10. 768,800

- Exercise 4

1. b, c, e, g

- Exercise 5

1. 2800g
2. 2000
3. 123,034   102,034   100,334   12,340   10,234
4. -15
5. 564,126
6. $\frac{7}{5}$
7. 20% and 0.2
8. 70°
9. 35,000
10. £72,700

- Exercise 6

1. a) 55
b) This is the **Fibonacci sequence**. The next **number** is found by adding up the two **numbers** before it. Fibonacci was an Italian **mathematician** from the thirteenth century.

- Exercise 7

1. 199,701
2. £5.64
3. 678
4. 3456
5. 53,935
6. 40°C
7. 452
8. 98,254
9. $4\frac{2}{4}$ or $4\frac{1}{2}$
10. 3.66m

1 The number 5 is at the centre and the other numbers in each line must add to make 15.

8	3	6
9	5	1
4	7	2

- Exercise 10

1 394, remainder: 1

2 1, 4, 9, 16, 25

3 35,607

4 63,000

5 [1] x 7 = 56 ÷ [8]

6 999

7 134,576

8 $\frac{33}{7}$

9 $\frac{7}{6}$ or $1\frac{1}{6}$

10 21.2 cm²

- Exercise 11

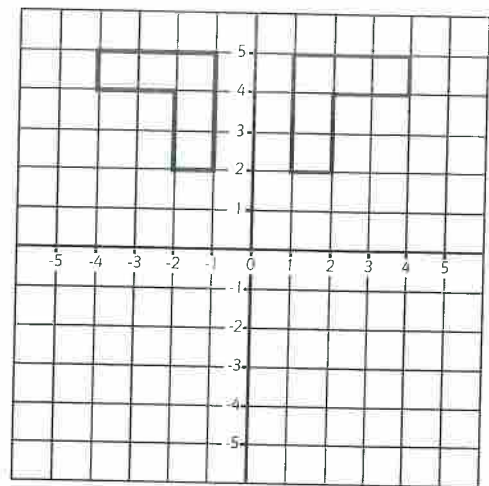**1** a) Equilateral triangle and hexagon.
   b) Accept any reasonable response.

- Exercise 13

1 1066

2 130,000

3 -3

4 345,910

5 984,398

6 £102.90

7 $\frac{18}{5}$

8 $\frac{13}{25}$

9 13 hours and 22 minutes

10

- Exercise 14

1 a) Manu b) Klara c) Emma
   d) Meg e) Chip f) Stig
   OR
   a) Manu b) Stig c) Chip
   d) Meg e) Emma f) Klara