END OF PRIMARY BENCHMARK

2018

SECOND SESSION

MATHEMATICS

WRITTEN PAPER

80 marks

1 hour 30 minutes

1. **Work out.**

a) 123 + 77 = _____	b) 1000 − 274 = _____
c) 34 × 12 = _____	d) 400 ÷ 20 = _____

(4 marks)

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2. Use the digits **3**, **4**, **5**, **6** and **7** to answer the following questions.
Note: Each digit cannot be used more than once in each question.

a) Write a **5-digit number larger than 40,000**. ___ ___ ___ ___ ___

b) Write a **3-digit number**, in which the **digit** in the **tens position** is **double** the **digit** in the **units position**. ___ ___ ___

c) Write the **largest 4-digit odd number possible**. ___ ___ ___ ___

(4 marks)

3*a*) Work out the **turn** in **degrees**:

(i) from **North** to **West** in *a* **clockwise direction**.

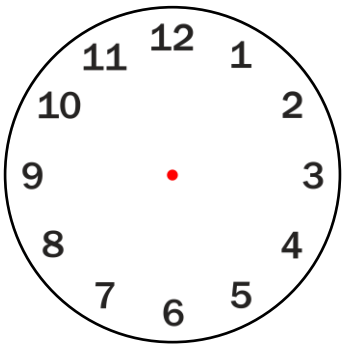
o

(ii) from **South** to **North East** in *an* **anticlockwise direction**.

o

b) (i) **Draw** the hands on the clock to show **3 o'clock**.

(ii) Work out the **size** of the **angle** that the **hour hand** turns from **03:00** to **10:00**.



o

(4 marks)

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4. Write the following in **ascending order of length**.

350 m, **1·5 km**, $\frac{1}{2}$ **m**, **0·15 km**

_____, _____, _____, _____

shortest **longest**

(4 marks)

5. A bag has some sweets.
The number of sweets in the bag is **exactly divisible** by **4**, **5** and **8**.
There are **fewer than 50 sweets** in the bag.
How many sweets are there in the bag?

Show your working here.

sweets

(5 marks)

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6. Look carefully at the number sequence below.

13, 17, 21, 25, 29, ...

a) The **next number** in this sequence is ☐.

b) The **first (1st) number** in this sequence is **13**.
The **third (3rd) number** in this sequence is **21**.

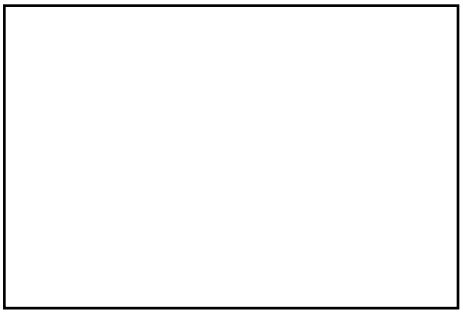
(i) The **tenth (10th) number** is ☐.

(ii) The **fiftieth (50th) number** is ☐.

(5 marks)

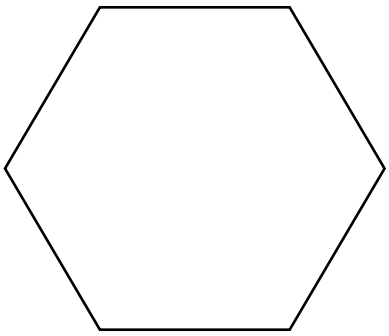
7*a*) How many **lines of symmetry** do these shapes have?

(i)



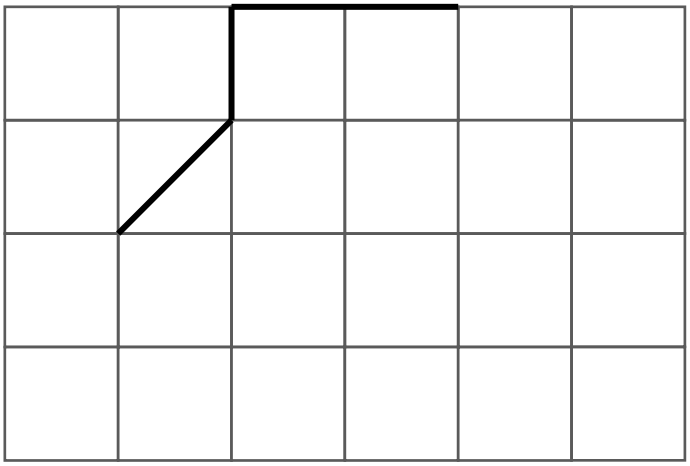
_____ **lines of symmetry**

(ii)



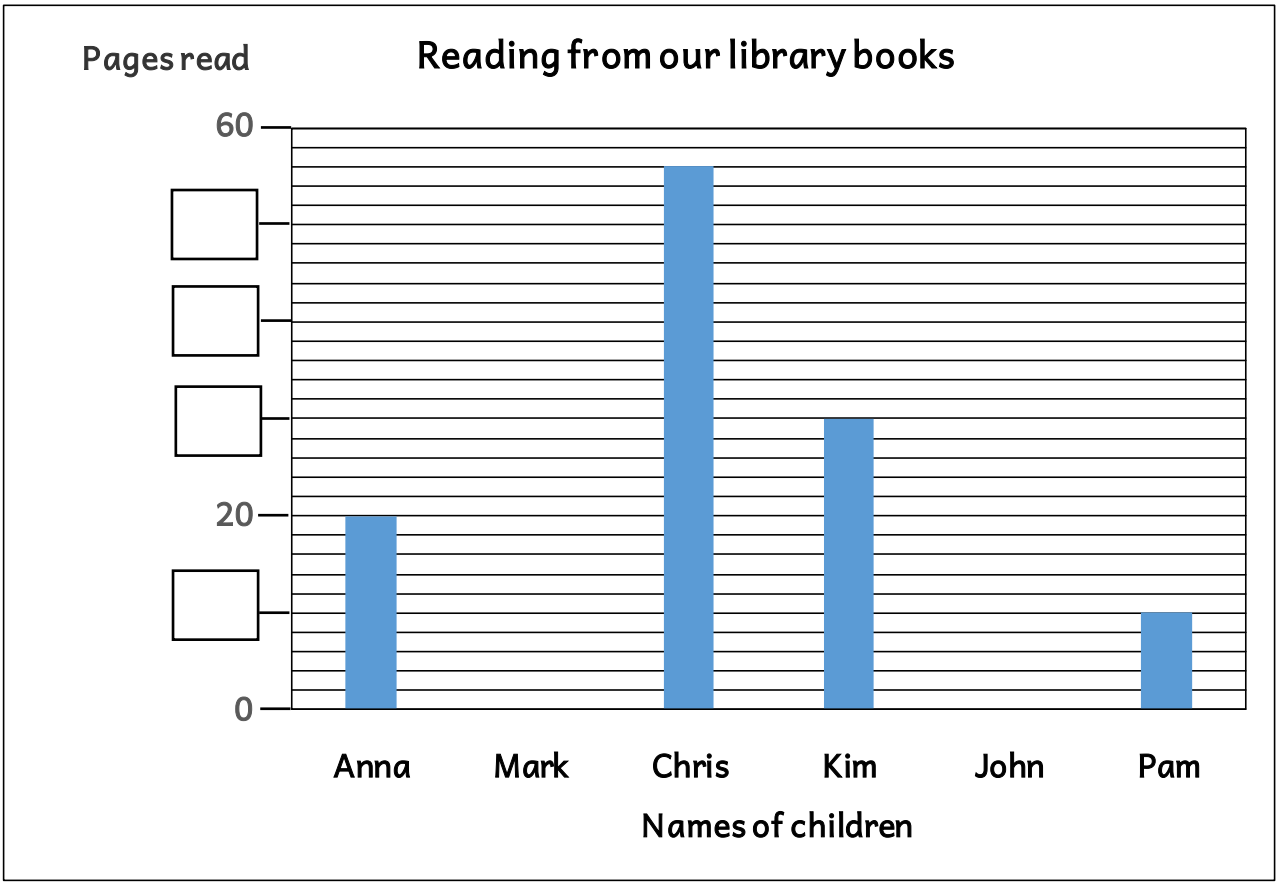
_____ **lines of symmetry**

b) **Draw four more sides** to form *a* polygon with **1 line of symmetry**.
Use *a* ruler.



(5 marks)

8. Look at this bar chart and the frequency table. They show the **number of pages** that each of the following **6 friends** has read from their library book.



Anna	Mark	Chris	Kim	John	Pam
20 pages	50 pages	56 pages	30 pages	44 pages	10 pages

a) **Fill in** the **missing numbers** on the **vertical axis** of the bar chart.

b) **Use a ruler** to **draw the missing bars** on the bar chart.

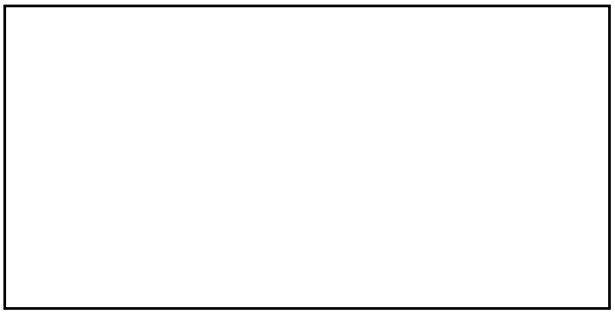
c) Mark read **50 pages**.

He read **one third of his book**.

Mark needs to read ☐ **more pages** to **finish** his book.

(5 marks)

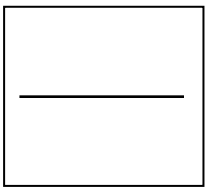
9a) Shade **one quarter** of this shape.



b) From the **fractions** below, **tick (✓)** the one which **is equal to** $\frac{1}{6}$.

$\frac{2}{18}$ ☐ $\frac{6}{18}$ ☐ $\frac{4}{24}$ ☐ $\frac{6}{24}$ ☐

c) Write *a* **fraction** which is **larger than** $\frac{1}{6}$ **but smaller than** $\frac{1}{5}$.



(5 marks)

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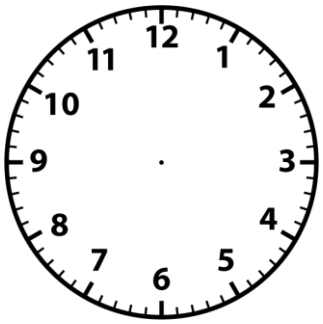
10. **Brenda's flight** from **Malta** to **Portugal** is **2 hours 58 minutes** long.
The plane leaves **Malta** at **22:30**.



a) **Draw** the hands on the clock face to show **22:30**.

b) The plane **lands** in Portugal at ☐ : ☐ .

Show your working here.

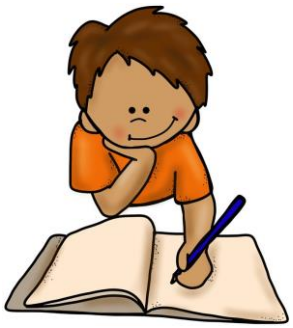
(5 marks)

11a) Write **two multiples of 9** which are **greater than 100**.

and

b) Martin lists **all** the **factors of 24** and **all** the **factors of 30**.

Which of these are **factors** of **both 24** and **30**?



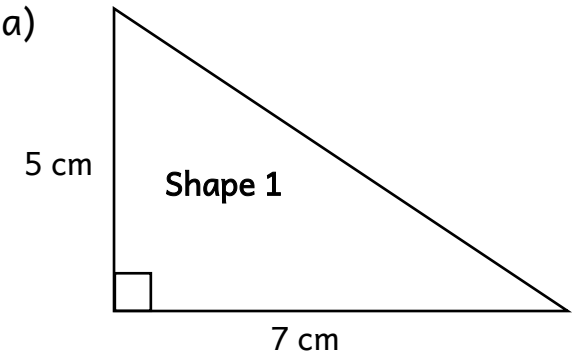
Show your working here.

(5 marks)

12. Hannah cuts **three shapes** out of paper.

This shape is not to scale.

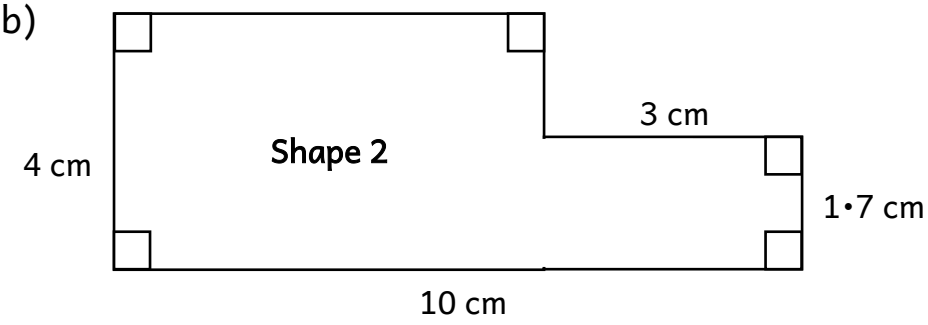
a)



The **area** of **Shape 1** is _____ **cm²**.

b)

This shape is not to scale.



The **area** of **Shape 2** is _____ **cm²**.

c) **Shape 3** is *a* **square** of **area 36 cm²**.

Each side of this **square** is _____ **cm**.

(5 marks)

13. A sum of money is **shared** among **Mark, John** and **Kate**.

Mark receives **30%** and John receives **55% of the sum**.

a) What **percentage** does **Kate** receive?

Show your working here.

%

b) **Express the sum of money** that **Mark** receives **as a fraction of the whole sum**.

—

c) The whole sum of money is **€3,500**.

How much **money** does **John** receive?

Show your working here.

€

(6 marks)

14. Michaela and Adam are preparing milkshakes.

They need **135 *ml* of milk** for **each glass** of **milkshake**.

They prepare as many milkshakes as they can from a **1 litre milk carton**.

a) How many **glasses of milkshake** do they prepare?

Show your working here.

milkshakes

b) How **much more milk** do they need to prepare **another milkshake**?

Show your working here.

ml

(6 marks)

15. The **mean (average) mass** of **6 students** is **34 kg**.
Look carefully at the table below.

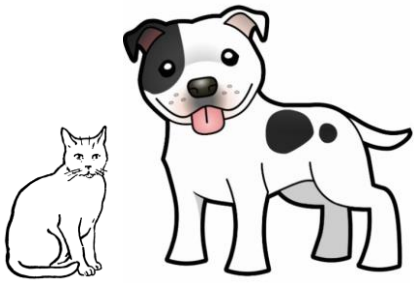
	Mass (Weight)
Karl	?
Maria	33 kg
Ian	37 kg
Fiona	35 kg
Max	34 kg
Jenny	29 kg

a) Work out **Karl's mass**.

Show your working here.

kg

b) Fiona has a cat and Ian has a dog.
Fiona's cat weighs **15.9 kg less** than **Ian's dog**.
The dog weighs **19•5 kg**.
Work out the **cat's mass**.



Show your working here.

kg

(6 marks)

16. In his garden Martin has **31 plants** in **all**.
Some are in **green pots** and some are in **red pots**.

a) Each plant in a **green pot** needs **2 litres of water** in one week.
Each plant in a **red pot** needs **1 litre of water** in one week.
Martin uses **46 litres of water** in **one week** to water **all** the plants in the **green** and the **red pots**.

How many **plants** in **green pots** are there in Martin's garden?

Show your working here.

plants in green pots

b) **Red pots** cost **€4·50** each.
What is the cost of **12 red pots**?

Show your working here.

€

(6 marks)

END OF PAPER