

KINGSTON, SUTTON

11+ Mock paper

11+ MATHEMATICS

Paper 2

45 Minutes

100 Marks

- *You will need a pencil and a ruler.*
- *Calculators are not allowed.*
- *Write your answers in the spaces provided on this paper.*
- *Use any spare space on the page for working out.*
- *Make sure to include units in your answers where necessary.*
- *Try to answer as many questions as you can.*
- *If you cannot do a question, leave it and move on to the next one.*

Work out the answers to the following sums.

1) $454 \times 23 =$

2) $1.5 \times 0.45 =$

3) Divide 1472 into 64 parts

4) Sally buys 12 oranges from the market.

Oranges - 54p each Buy 3 and get the 4th for half price
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How much does she pay?

Turn Over

5) This is a scale drawing of a sports pitch.



DRAWN
TO
SCALE

81 m

(a) The length is 81 m. Calculate the width of the sports pitch.

_____ m

(b) Using the same scale, I draw a line that measures 30.25 cm.
What actual length does this line represent?

_____ m

6) Fill in the gaps in the following questions.

(a) $3.79 \times \underline{\hspace{2cm}} = 3790$

(b) $4500 \div \underline{\hspace{2cm}} = 0.45$

(c) $400 \times \underline{\hspace{2cm}} = 200$

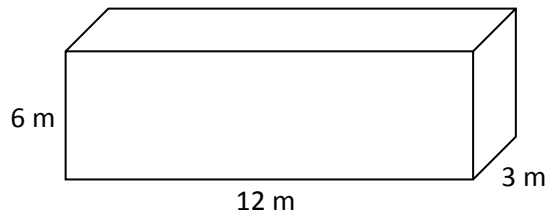
(d) $-250 + \underline{\hspace{2cm}} = 123$

Turn Over

- 7) John has 520 coins in his collection.
 $\frac{3}{8}$ are made from bronze.
 $\frac{1}{5}$ are made from gold.
15% are made from silver.
The rest are made from tin.

How many coins are made from tin?

- 8) This question is about a rectangular water container shown below.



NOT
DRAWN
TO
SCALE

- (a) What is the volume of the container?

- (b) The container is filled with 144,000 litres of water.
What height does the water reach in the container?

Hint: 1000 litres = 1 m³

Turn Over

- 9) Steven took $3\frac{2}{3}$ minutes to complete a race while John took $2\frac{4}{5}$ minutes.
How much faster was John than Steven?
Give your answer in seconds.

_____ seconds

10) This question is about factors.

- (a) How many factors does the number 30 have?

- (b) Which number has more factors, 24 or 36?

- (c) How many factors does the number 37 have?

- (d) What do we call numbers that have exactly two factors?

Turn Over

11) $764 \times 125 = 95500$

Use the calculation above to help you answer the following questions.

(a) $7.64 \times 1.25 =$ _____

(b) $95500 \div 764 =$ _____

(c) $1528 \times 375 =$ _____

12) The temperature in Moscow was 12°C on Monday. On Tuesday, it declined by 50%. On Wednesday, it dropped a further 7 degrees.
What was the temperature in Moscow on Wednesday?

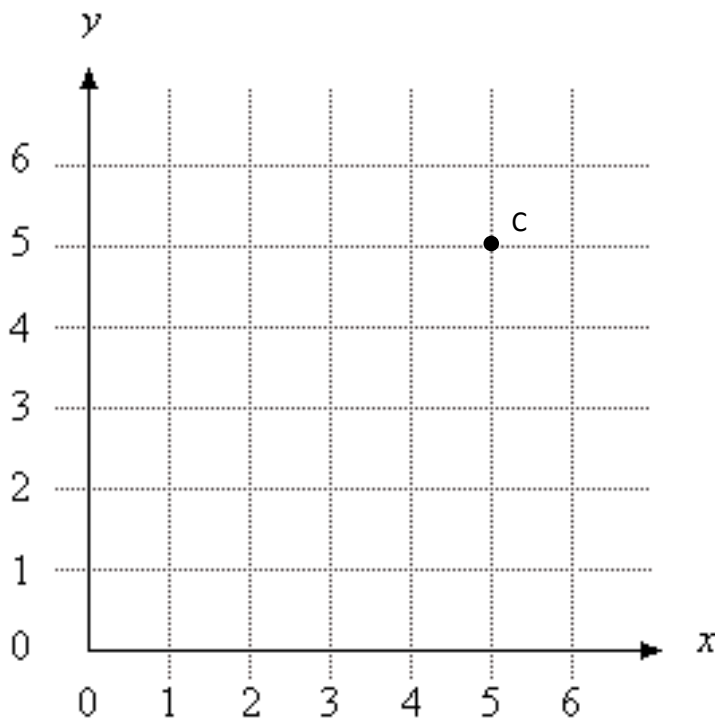
13) 2^4 means $2 \times 2 \times 2 \times 2$
 3^3 means $3 \times 3 \times 3$

(a) What is the difference between 3^3 and 2^4 ?

(b) Calculate $7^3 + 5^3$

Turn Over

14)



On the grid above, 1 unit represents 3 km.

(a) What are the coordinates of point C? _____

(b) Point B is 6 km West of point C.
Point Z is 12 km South of point B.
Plot points B and Z on the grid above.

(c) What is the area of the triangle ZBC?
Give your answer in km^2 .

_____ km^2

(d) Point F has the coordinates (2, 2).
Given that CBFY is a kite, write down the co-ordinates of Y.

Turn Over

15)



Clock 1



Clock 2

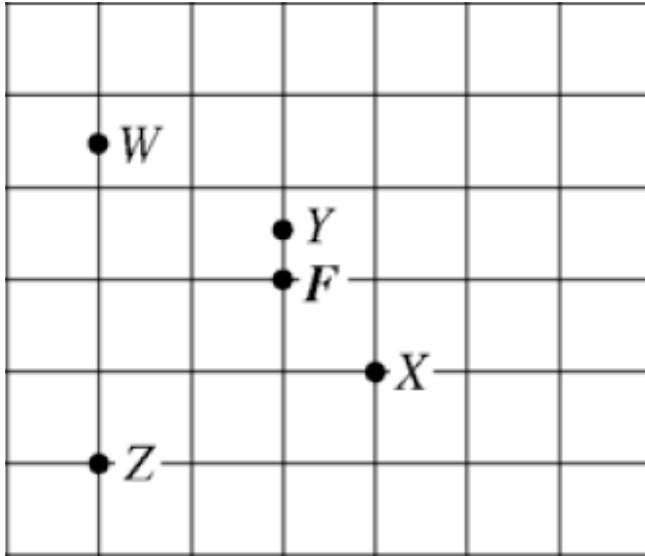
(a) Calculate the smaller angle between the hands in Clock 1.

(b) How many minutes are there from the time shown on Clock 1 to the time shown on Clock 2?

16) A faulty clock runs 90 seconds slow per hour.
If the clock currently shows the time 16:23, what time will it show in exactly 4 hours?

Turn Over

17)



The gridlines above represent equally spaced streets in a town and each point represents a building.

Point F represents the Firestation.

The 'x-distance' is defined as the minimum number of streets that a fire-engine must travel from the Firestation to the other buildings.

For example, the building at X has an 'x-distance' of 2 whilst the building at Y has an 'x-distance' of $\frac{1}{2}$.

(a) What is the 'x-distance' of the building at W from the Firestation?

(b) How many different 'x-distance' routes are possible between the Firestation and point Z?

(c) John plots all the points on the grid that have an 'x-distance' of exactly 3 and then joins them up.

What shape does John draw?

Turn Over

- 18) A total of 300,000 votes are cast in an election between Politician A and Politician B. If Politician A wins by a ratio of 8:7, how many votes were cast for Politician B?

- 19) Linda wishes to buy a new coat. She sees the following two adverts for the coat she wants. The original price of the coat is £72.

15% off the original price!

Advert 1

Pay 50% of the original price up front and then 12 weekly instalments of £2.15

Advert 2

How much more will Linda pay in total if she chooses the deal in Advert 2 rather than the deal in Advert 1?

- 20) ABC is an isosceles triangle. Angle A is 92° . Calculate the size of Angles B and C.

(a) Angle B = _____

(b) Angle C = _____

Turn Over

21) Amy, Peter, John and Sophie go shopping together. Peter spends £25.50, Amy spends £21.43 and John spends £27.90.
The average spend for all four of them was £24.87.
How much did Sophie spend?

22) There are 7 blue balls, 6 green balls and 4 yellow balls in a bag.

(a) What is the probability of picking a blue ball from the bag?

(b) If I pick out a blue ball and do not replace it, what is the probability of me then picking a yellow ball from the bag?

(c) What is the probability of me picking a yellow ball and then a red ball out of the bag?

23) How many different ways are there to arrange 4 books in a row on a shelf?

Turn Over

24) Place the numbers 1 to 8 in each of the following grids so that each side adds up to the number in the middle.

(a)

	12	

(b)

	15	

NOW GO BACK AND CHECK ALL YOUR ANSWERS