

## OCR GCSE Mathematics Calculator 2023 Foundation Paper 1 Revision Worksheet

## Question 11

Cookies are made using these ingredients. (Makes 24 cookies)

- 240 g butter
- 360 g sugar
- 2 eggs
- 240 g flour
- 170 g cranberries
- 100 g white chocolate

(a) How many eggs are needed to make 48 cookies?

(b) How much sugar is needed to make 6 cookies?

(c) Ashley has 520 g of cranberries and plenty of the other ingredients. Ashley thinks this is enough to make at least 80 cookies. Is Ashley correct? Show working to support your answer.

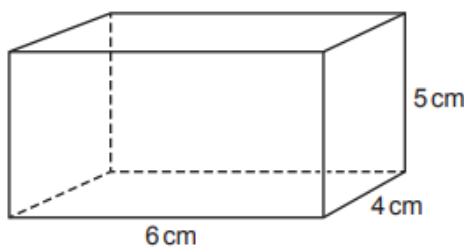
(d) Darcie makes 100 cookies. They are put into packets, each holding 6 cookies. Each packet of 6 cookies is sold for £1.35

Darcie sells all of these packets. **Work out how much money Darcie receives.**

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## Question 12

Work out the surface area of the cuboid



## Question 13

Kareem runs 2460 metres in 8 minutes.

(a) Calculate his average speed in metres per minute.

(b) Kareem says: "This means I can run 6150 metres in 20 minutes." Write down one assumption Kareem has made.

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## Question 14

Show the inequality  $x > -2$  on this number line.



## Question 15

Finley has 72 sweets. Finley gives:

- 25% of the sweets to Alex
- $\frac{1}{6}$  of the sweets to Umi.

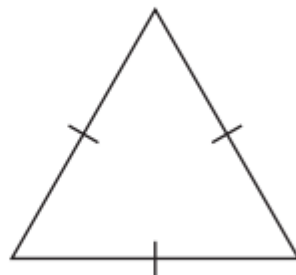
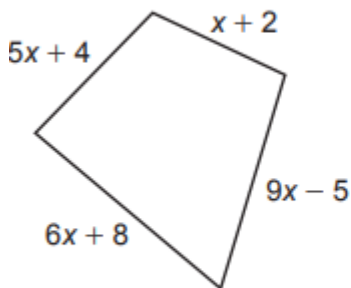
Show that Finley has  $\frac{7}{12}$  of the sweets left.

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## Question 16

The diagram shows a quadrilateral and an equilateral triangle.

The perimeter of the quadrilateral is equal to the perimeter of the equilateral triangle.



**Not to scale**

Find an expression for the length of one side of the equilateral triangle.

Give your answer in terms of  $x$  in its simplest form.

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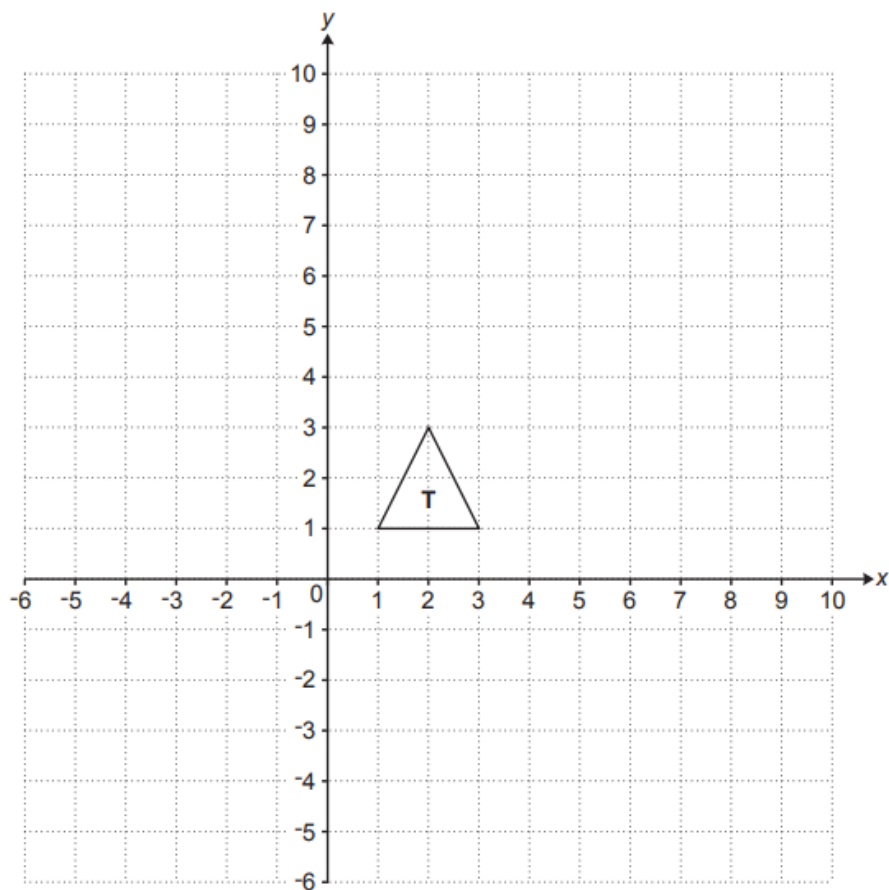
## Question 17

Multiply out and simplify:  $(3x + 2y)(x + y)$

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## Question 18

Triangle **T** is drawn on a coordinate grid.



- (a) Triangle **A** is translated by  $\begin{pmatrix} 6 \\ -3 \end{pmatrix}$  to give triangle **T**.

Draw and label triangle **A** on the grid.

- (b) Triangle **T** is rotated through  $90^\circ$  anticlockwise about (0, 0) to give triangle **B**.

Draw and label triangle **B** on the grid.

- (c) Triangle **T** is reflected in the line  $y = -1$  to give triangle **C**.

Draw and label triangle **C** on the grid.

## Question 19

Calculate.

$$\sqrt{5.2^2 - 4.8 \times 6.3}$$

Give your answer correct to 3 significant figures.

**Question 20**

The price of petrol decreases from £1.32 per litre to £1.02 per litre.

Calculate the percentage decrease in the price.

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**Question 21**

Trams to the airport leave every 50 minutes.

Trams to the beach leave every 35 minutes.

A tram to the airport and a tram to the beach leave together at 9:30 am.

**When is the next time that two of these trams leave together?**