

Edexcel GCSE Mathematics Non-Calculator 2021 Higher Paper 1 Revision Worksheet

Question 3

Work out $4\frac{1}{5} - 2\frac{2}{3}$.

Give your answer as a mixed number.

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Question 4

At the end of 2017, the value of Tamara's house was £220,000 and the value of Rahim's house was £160,000.

At the end of 2019:

- The value of Tamara's house had decreased by 20%.
- The value of Rahim's house had increased by 30%.

At the end of 2019, whose house had the greater value?

You must show how you get your answer.

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Question 5

Rosie, Matilda and Ibrahim collect stickers.

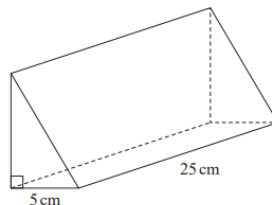
Number of stickers (Rosie) : Number of stickers (Matilda) : Number of stickers (Ibrahim) = 4 : 7 : 15

Ibrahim has 24 more stickers than Matilda.

Ibrahim has more stickers than Rosie. **How many more?**

Question 6

The diagram shows a prism.



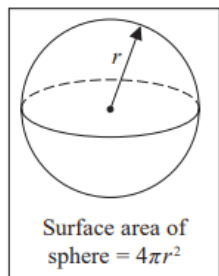
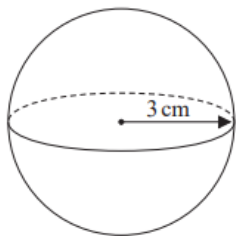
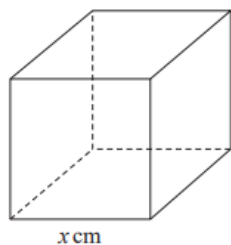
The cross section of the prism is a right-angled triangle. The base of the triangle has length 5 cm. The prism has length 25 cm. The prism has volume 750 cm^3 .

Work out the height of the prism.

..... cm

Question 7

The diagram shows a cube with edges of length x cm and a sphere of radius 3 cm.



The surface area of the cube is equal to the surface area of the sphere.

Show that $x = \sqrt{k\pi}$ where k is an integer.

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Question 8

Solve $x^2 = 5x + 24$.

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Question 9

(a) Write down the value of 7^0

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(b) Find the value of $3 \times 3^6 \times 3^{-6}$

.....

(c) Find the value of 2^{-4}

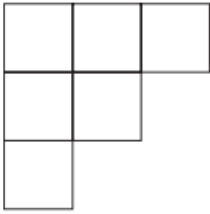
.....

(d) Find the value of $27^{1/3}$

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Question 10

The diagram shows a shape made from 6 identical squares.



The total area of the shape is 5406 cm^2 .

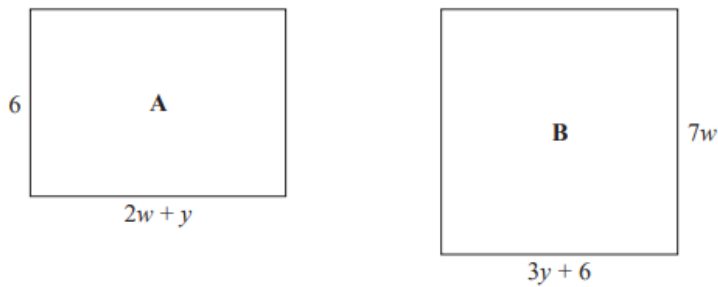
(a) Find an estimate for the length of one side of each square. Give your answer correct to the nearest whole number.

..... cm

(b) Is your answer to part (a) an underestimate or an overestimate? You must give a reason for your answer.

Question 11

The diagram shows two rectangles, A and B.



The area of rectangle A is equal to the area of rectangle B.

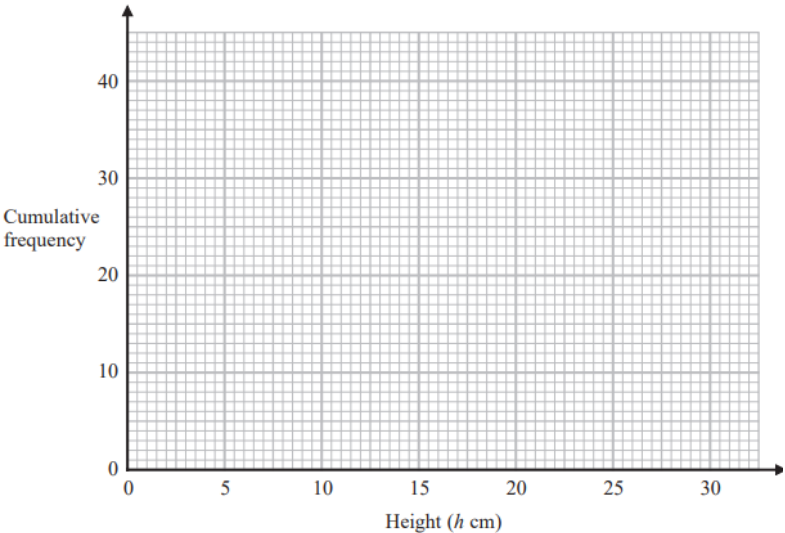
Find an expression for y in terms of w .

Question 12

The cumulative frequency table gives information about the heights, in cm, of 40 plants.

Height (h cm)	Cumulative Frequency
$0 < h \leq 5$	4
$0 < h \leq 10$	11
$0 < h \leq 15$	24
$0 < h \leq 20$	34
$0 < h \leq 25$	38
$0 < h \leq 30$	40

(a) On the grid, draw a cumulative frequency graph for this information.



(2)

(b) Use the graph to find an estimate for the median height of the plants.

(b) Use the graph to find an estimate for the median height of the plants.
..... cm

Question 13

Ted is trying to change 0.43 (i.e., 0.43333...) to a fraction.

Here is the start of his method:

$$x = 0.43$$

$$10x = 4.33$$

$$10x - x = 4.33 - 0.43$$

Evaluate Ted's method so far.

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