

19 An aeroplane travelled from New York City to Los Angeles.

The aeroplane travelled a distance of 3980 kilometres in 5 hours 24 minutes.

Work out the average speed of the aeroplane.

Give your answer in kilometres per hour correct to the nearest whole number.

..... kilometres per hour

(Total for Question 19 is 3 marks)

20 Show that $5\frac{1}{3} - 2\frac{6}{7} = 2\frac{10}{21}$

(Total for Question 20 is 3 marks)



21 The diagram shows an 8-sided shape $ABCDEFGH$.

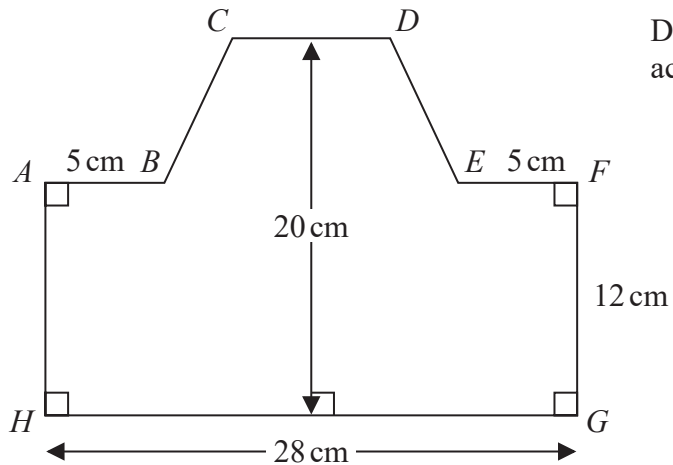


Diagram **NOT** accurately drawn

$HG = 28 \text{ cm}$ $FG = 12 \text{ cm}$ $AB = EF = 5 \text{ cm}$

The height of the shape is 20 cm

CD is parallel to HG

The area of shape $ABCDEFGH$ is 434 cm^2

Find the length of CD .

..... cm

(Total for Question 21 is 4 marks)

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22 The diagram shows triangle PQR .

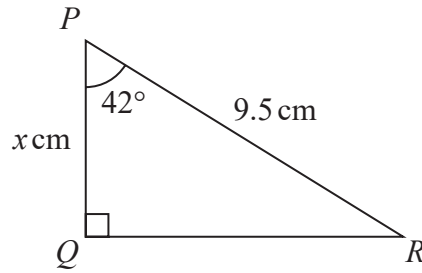


Diagram **NOT**
accurately drawn

Work out the value of x
Give your answer correct to one decimal place.

$x =$

(Total for Question 22 is 3 marks)

23 Change a speed of 81 kilometres per hour to a speed in metres per second.

..... metres per second

(Total for Question 23 is 3 marks)



24 Behnaz makes 300 celebration cards so that

number of birthday cards : number of anniversary cards : number of congratulations cards = 7:5:3

$\frac{2}{5}$ of the birthday cards have numbers on them.

36% of the anniversary cards have numbers on them.

None of the congratulations cards have numbers on them.

Work out what fraction of the 300 cards have numbers on them.

Give your answer in its simplest form.

(Total for Question 24 is 5 marks)



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25 Pasha invests 50 000 dollars in a savings account for 4 years.
He gets 1.3% per year compound interest.

Work out how much money Pasha will have in his savings account at the end of 4 years.
Give your answer correct to the nearest dollar.

..... dollars

(Total for Question 25 is 3 marks)



26 Solve the simultaneous equations

$$\begin{aligned}7x + 3y &= 3 \\ 3x - y &= 7\end{aligned}$$

Show clear algebraic working.

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots$$

(Total for Question 26 is 3 marks)

27 (i) Factorise $x^2 + 5x - 24$

.....
(2)

(ii) Hence, solve $x^2 + 5x - 24 = 0$

.....
(1)

(Total for Question 27 is 3 marks)



28 Larry is a delivery man.

He has 7 parcels to deliver.

The mean weight of the 7 parcels is 2.7 kg

Larry delivers 3 of the parcels.

Each of these 3 parcels has a weight of W kg

The mean weight of the other 4 parcels is 3.3 kg

Work out the value of W

$W = \dots\dots\dots$

(Total for Question 28 is 3 marks)

TOTAL FOR PAPER IS 100 MARKS

