S4 National 4 Added Value Revision

Percentages

Q1 Find:

a)	20% of £120	b)	30% of £430	c)	60% of £810
d)	40% of £480	e)	30% of £750	f)	20% of £34

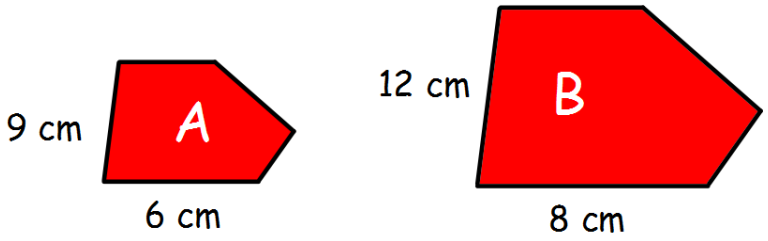
Q2 James bought a car worth £6,700. When purchasing the car he put down a 30% deposit.

Calculate how much James paid in his deposit.

Scale factor

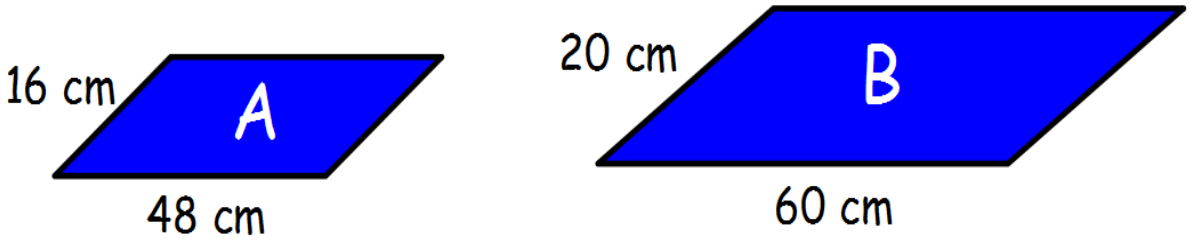
Q3 Shape A has been enlarged by a scale factor of $^4/_3$.

Are the measurements on Shape B correct?



Q4 Shape A has been enlarged by a scale factor of $^5/_2$.

Are the measurements on Shape B correct?



Fraction of a quantity

Q5 Find:

a) $^3/_4$ of 60 b) $^4/_5$ of 35 c) $^2/_3$ of 120

d) $^5/_6$ of 36 e) $^2/_5$ of 70 f) $^5/_6$ of 90

Decimals

Q6 To make green paint, a painter mixed 3.5 litres of yellow paint with 2.71 litres of blue paint.

After painting a wall, the painter only used 4.8 litres of the green paint.

How many litres does he have left?

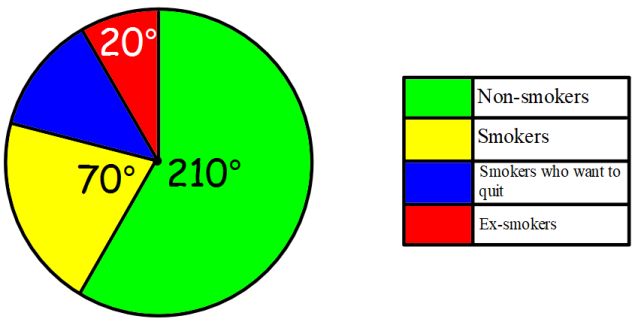
Q7 To make orange paint, a painter mixed 2.86 litres of red paint with 4.13 litres of yellow paint.

After painting a wall, the painter only used 5.81 litres of paint.

How many litres does he have left?

Pie charts

Q8 Some workers attend a health screening. The pie chart illustrates the information about their smoking habits.



If 240 workers attended the health day, how many of them were smokers who wanted to quit?

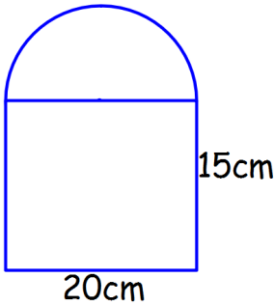
Equations

Q10 Solve:

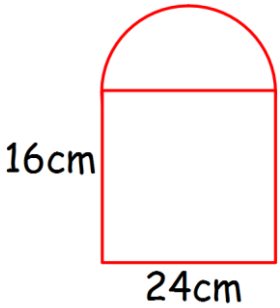
a) $3x + 1 = 2x + 10$ b) $6x + 2 = 3x + 17$ c) $5x - 3 = 3x + 17$

Area

Q11 Find the area of the shape below:



Q12 Find the area of the shape below:



Patterns

Q13

A	1	2	3	4	5
B	4	6	8		

(i) Copy and complete the table.

(ii) Generate a formula in terms of A and B.

(iii) Evaluate B when A = 12

(iv) Evaluate A when B = 32

Q14

C	1	2	3	4	5
D	3	7	11		

(i) Copy and complete the table.

(ii) Generate a formula in terms of C and D.

(iii) Evaluate D when C = 20

(iv) Evaluate C when D = 35

Distance/Speed/Time

Q16 A car was driving at an average speed of 35mph for 2 hours and 30 minutes.

Calculate the distance the car has travelled.

Q17 A plane flew 550 miles in 2 hours and 36 minutes.

Calculate the plane's average speed.

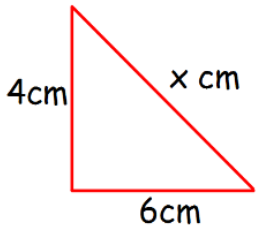
Q18 A man ran 16.25km at an average speed of 5 km/hr.

Calculate how long the man was running.

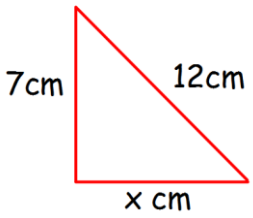
Pythagoras

Q19 Calculate the length of the side marked x.

a)

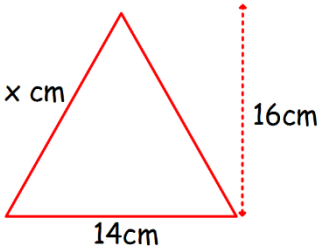


b)

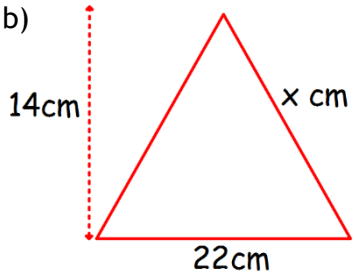


Q20 Calculate the length marked x.

a)



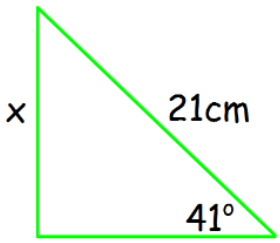
b)



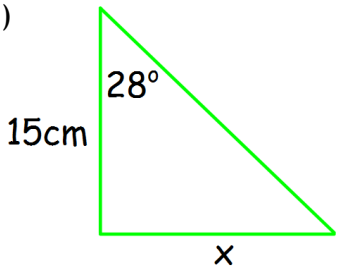
SOHCAHTOA

Q21 Calculate the length of the side marked x.

a)

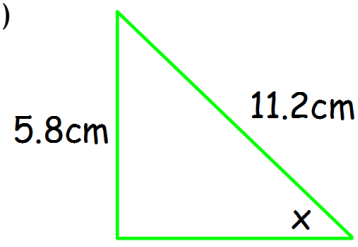


b)

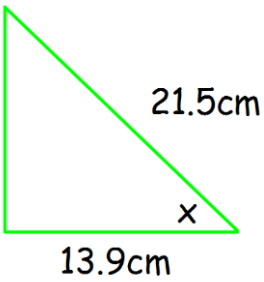


Q22 Calculate the size of the angle marked x.

a)



b)



Probability

Q23 In a class of 30, there are 14 boys and 16 girls.

The teacher asks a random pupil to roll a dice.

Which of the following has the greatest probability?

(i) the pupil asked is a girl or (ii) the dice lands on an even number?