

Year 10 Foundation learn sheet: March Assessment

Year 10 Higher topics to learn

Names of polygons
Bar chart
Simplifying algebra
Loci
Probability
Mean/mode/median/range
Prime & square numbers
Money - problem solving

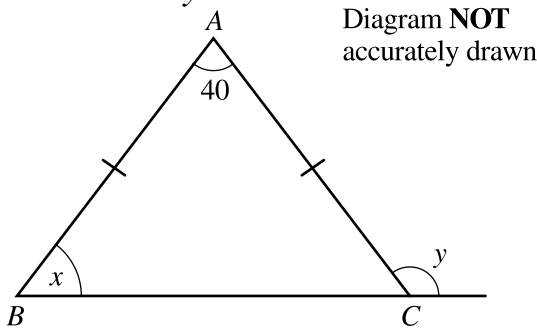
+/-/x/÷ problems in words
Money problem solving
Angles in triangles
Circumference of circle
Calculating bills
Converting between units
Solving equations
Volume of cuboids

Using a calculator
Time calculations
Fractions to %
Pythagoras
Sequences
Forming an expression
% of amounts

Practise these revision questions:

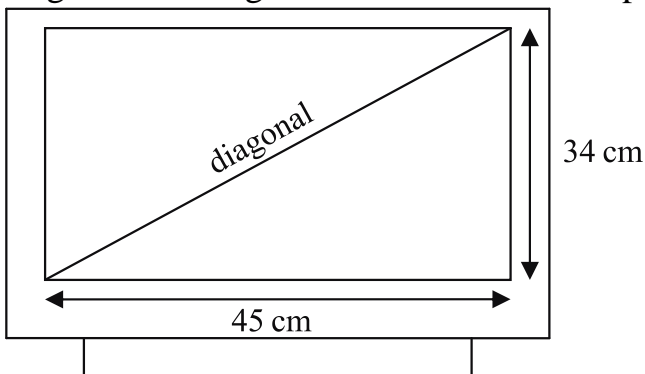
1. How many sides does a pentagon have?

2. $AB = BC$. Work out the size of the angles marked x and y



3. A petrol tank which has 10 litres of fuel in it, holds 35 litres when full. A litre of petrol costs 109p. Work out the cost of the petrol which has to be added to the tank so that it is full.

4. A rectangular TV screen has a width of 45 cm and a height of 34 cm. Work out the length of the diagonal of the screen to 1 dp.



5. From this list of numbers

12 15 21 24 31 32 36 42

Write down the square number and the prime number.

6. a) Simplify $m + m + m + m$

(b) Simplify $w \times 8 \times 2h$

(c) Simplify $17x + 5f - 9f - 3x$

7. Solve these equations:

(a) $5x - 31 = 76$

(b) $5(x - 7) = 50$

(c) $5x - 42 = x + 98$

(d) $4x - 1 = 2x - 6$

8. Work out 32.5% of £16

9. Find the circumference of a circle of radius 8 cm giving your answer to 3 significant figures.

10. A bag has some red, green and blue marbles in it. The probability of getting a red marble is 0.6. The probability for a green is the same as the probability of getting a blue marble. What is the probability of getting a blue marble?

11. The volume of a cuboid is 600 cm^3 . If the length is 6cm and the width is 8cm, then what is the height of the cuboid?

12. 2.5 m of curtain and 3 m of curtain rail cost a total of £32

1.5 m of curtain cost £12

Work out the cost of 1 m of curtain rail.

Answers to practice questions:

1. 5

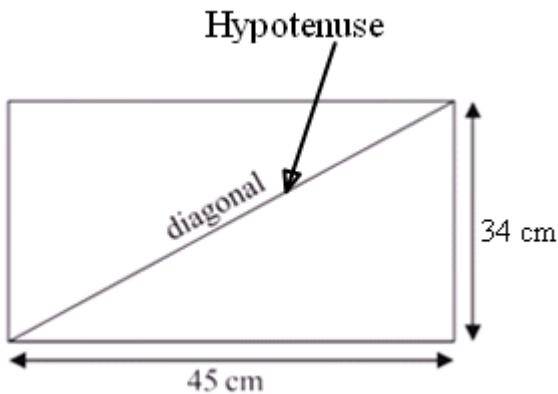
2. $180 - 40 = 140$

$x = 140 \div 2 = \underline{70^\circ}$

3. $35 - 10 = 25$ (litres to fill tank)

$25 \times 109 = 2725 = \underline{\pounds 27.25}$

4. Using Pythagoras' rule $c^2 = a^2 + b^2$
(c = hypotenuse)



$d^2 = 45^2 + 34^2$

$= 2025 + 1156 = 3181$

$d = \sqrt{3181} = \underline{56.4 \text{ cm}}$ to 1dp

5. square number = 36 prime number = 31

6. $m + m + m + m = \underline{4m}$

(b) $w \times 8 \times 2h = \underline{16wh}$ (or 16hw)

(c) $7x + 5f - 9f - 3x$

$17x - 3x = 14x$ $5f - 9f = -4f$

Therefore, $17x + 5f - 9f - 3x = \underline{14x - 4f}$

7. (a) $5x - 31 = 76$

$5x = 76 + 31$

$5x = 107$

$x = 107 \div 5 = \underline{21.4}$

(b) $5(x - 7) = 50$

$5x - 35 = 50$

$5x = 50 + 35$

$5x = 85$

$x = 85 \div 5 = \underline{17}$

7. (c) $5x - 42 = x + 98$

$5x - x - 42 = 98$

$4x - 42 = 98$

$4x = 98 + 42$

$4x = 140$

$x = 140 \div 4 = \underline{35}$

(d) $4x - 1 = 2x - 6$

$4x - 2x - 1 = -6$

$2x - 1 = -6$

$2x = -1 - 6$

$2x = -5$

$x = -5 \div 2 = \underline{-2.5}$

8. 32.5% of $\pounds 16 = \frac{32.5}{100} \times 16 = 5.2 = \underline{\pounds 5.20}$

9. $C = \pi d$

radius = 8cm, diameter = $2 \times$ radius = 16cm

$C = \pi \times 16 = \underline{50.3 \text{ cm}}$

10. (Probabilities add up to 1)

$1 - 0.6 = 0.4$

$0.4 \div 2 = \underline{0.2}$

11. Volume of cuboid = $L \times W \times H$

$600 = 6 \times 8 \times H$

$600 = 48 \times H$

$600 \div 48 = H$

$H = \underline{12.5 \text{ cm}}$

12. 1.5 m of curtain cost $\pounds 12$

1 m costs $\pounds 12 \div 1.5 = \pounds 8$

2.5 m = $\pounds 8 \times 2.5 = \pounds 20$

2.5 m of curtain and 3 m of curtain rail cost a total of $\pounds 32$

3 m curtain rail costs $\pounds 32 - \pounds 20 = \pounds 12$

1 m of curtain rail costs $\pounds 12 \div 3 = \underline{\pounds 4}$