Daily Practice 8.9.2017

Q1. State the equation of the line joining (-2, 3) and (0, 4)

$m = \frac{4-3}{0+2} = \frac{1}{2}$

$y = \frac{1}{2}x + 4$

Q2. Share £30 in the ratio 3:2 $3+2=5$

6
5⟌30
×3 ×2
£18 £12

Q3. Calculate the mean, median and range of

3,4,5,7,8,9

7, 8, 4, 5, 3, 9

mean = $\frac{36}{6} = 6$

median = 6

Range = 9 - 3 = 6

Q4. Factorise 3x - 6 = 3(x-2)

Q5. $1\frac{3}{8} - \frac{1}{5}$ $= \frac{11}{8} - \frac{1}{5}$

$= \frac{55}{40} - \frac{8}{40} = \frac{47}{40} = 1\frac{7}{40}$

Today we are going to be learning about proportion.

Direct Proportion

Two quantities are in direct proportion if a change in one always accompanys a change in the other in the same ratio.

Examples:

1. John sells a box of 5 cupcakes for £7.85. How much would John sell 3 cupcakes for?

1 cupcake = 7.85 ÷ 5 = £1.57

3 cupcakes = £1.57 × 3 = £4.71

2. It takes Tim 3 and a half hours to drive 190km. How far would he travel in 2 hours?

1 hour = 190 ÷ 3.5 = 54.29

2 hours = 108.58 km (2d.p.)

Today we will be learning about inverse proportion.

Daily Practice 11.9.2017

Q1. Write 26 500 in scientific notation

2.65×10^4

Q2. Solve for x, 6x - 15 = 3x + 21

3x - 15 = 21

3x = 36

x = 12

Q3. Find 8.5% of 900 (Non - Calc.)

1% of 900 = 9

8% of 900 = 9 × 8 = 72

0.5% of 900 = 4.5

72 + 4.5 = 76.5

Q4. Round 54.335 to 3 significant figures

→ 54.3

Q5. Share £700 in the ratio 4:1

140
5⟌700
140 × 4 = £560
140 × 1 = £140

Inverse Proportion

Two quantities are inversely propotional if as one quantity increases, the other decreases proportionally and vice versa.

Examples:

1. It takes 6 chefs 3 hours to prepare before a wedding dinner. How long would it take 8 chefs to prepare the same dinner?

6 chefs → 3hours (÷6, ×6)

1 chef → 18hours (×8, ÷8)

8 chefs → 2.25 hrs = 2hrs 15mins

2. A car drives at 50kmph and takes 2 hours to cover a distance, how long would it take the car to cover the same distance at 80kmph?

page 45 46

50kmph → 2hours (÷5, ×5)

10kmph → 10hours (×8, ÷8)

80kmph → 1.25hours = 1hr 15mins

Daily Practice 13.9.2017

Q1. Multiply out and simplify $7(x + 3) + 2x^2 + 3x(4x - 1)$

Q2. Find the cost of a house that was worth £130 000 and increased in value by 15%

Q3. Round 7.858 to 2 significant figures

Q4. $3\frac{2}{3} \div \frac{1}{5}$

Q5. Calculate the value of x