GCSE HIGHER · REVISION MAT 3

Solving linear equations

1 Solve

$$4(x + 3) = 32$$

2 Solve

$$9 - 2x = 3x - 6$$

3 Find the mistake in this working.

$$3x + 5 = 20$$
$$3x = 25$$
$$x = \frac{25}{3}$$

4 A rectangle is $(2x + 3)$ cm long and $(x - 1)$ cm wide.

Its perimeter is 40 cm.

Find its area.

5 Show that the solution of

$$3(x - 4) + 2(x + 1) = 4(x - 1) + 3$$

is $x = 9$.

6 The angles of a quadrilateral are

$$x°,\ 2x°,\ (x + 30)°,\ (2x - 30)°$$

Find the size of the largest angle.

7 Solve

$$\frac{x}{2} + \frac{x}{3} + \frac{x}{4} = 26$$

8 A fraction is $\frac{x}{x + 5}$.

When 3 is added to the numerator and the denominator, it becomes $\frac{2}{3}$.

Find the original fraction.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 3

Solving linear equations

1 $x + 3 = 8$

$x = 5$

2 $15 = 5x$

$x = 3$

3 5 should be subtracted, not added.

$3x = 15$

$x = 5$

4 $2(3x + 2) = 40$

$6x = 36 \Rightarrow x = 6$

15 cm by 5 cm

Area = 75 cm²

5 $5x - 10 = 4x - 1$

$x = 9$

6 $6x = 360 \Rightarrow x = 60$

Angles 60°, 120°, 90°, 90°

Largest = 120°

7 $6x + 4x + 3x = 312$

$13x = 312$

$x = 24$

8 $3(x + 3) = 2(x + 8)$

$3x + 9 = 2x + 16 \Rightarrow x = 7$

$\frac{7}{12}$

Mr&Mrs MATHS