GCSE HIGHER · REVISION MAT 4

Solving linear equations

1 Solve

$$6x + 1 = 43$$

2 Solve

$$2(3x - 4) = 5(x + 1)$$

3 Tim multiplies a number by 5 and subtracts 3.

He gets the same as when he multiplies it by 3 and adds 11.

Show that the number is 7.

4 An equilateral triangle has sides of $2x$ cm.

A square has sides of $(x + 3)$ cm.

They have the same perimeter.

Find the perimeter.

5 Solve

$$\frac{3x + 5}{2} = \frac{4x - 1}{3}$$

6 Ann is twice as old as Bob.

6 years ago, Ann was 3 times as old as Bob.

Find their ages now.

7 Solve

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

8 Two consecutive even numbers: a third of the first plus a quarter of the second is 18.

Find the numbers.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 4

Solving linear equations

1 $6x = 42$

$x = 7$

2 $6x - 8 = 5x + 5$

$x = 13$

3 $5n - 3 = 3n + 11$

$2n = 14$

$n = 7$

4 $6x = 4(x + 3)$

$2x = 12 \Rightarrow x = 6$

Perimeter = 36 cm

5 $3(3x + 5) = 2(4x - 1)$

$9x + 15 = 8x - 2$

$x = -17$

6 $2b - 6 = 3(b - 6)$

$2b - 6 = 3b - 18$

Bob 12, Ann 24

7 $4(x - 2) = 3(x + 1)$

$4x - 8 = 3x + 3$

$x = 11$

8 $\frac{n}{3} + \frac{n+2}{4} = 18$

$4n + 3n + 6 = 216$

$7n = 210 \Rightarrow n = 30$

30 and 32

Mr&Mrs MATHS