GCSE HIGHER · MIXED REVISION MAT 5

# Mixed topics

**1** Find the area of a triangle with base 14 cm and height 9 cm.

**2** A metal has density 7.5 g/cm³.

Find the volume of 600 g.

**3** Show that

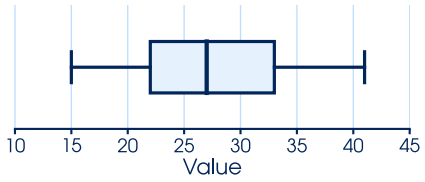
$$(2x - 3)^2 = 4x^2 - 12x + 9$$

**4** A car loses 15% of its value each year.

After 3 years it is worth £9826.

Find its original value.

**5** Show that the interquartile range is 11.




**6** A plane flies 180 km north and then 240 km east.

Find its distance from the start and the bearing it must fly to return.

**7** Show that

$$\left(\frac{8}{27}\right)^{-2/3} = \frac{9}{4}$$

**8** Two numbers differ by 5 and multiply to give 84.

Find the possible pairs.

ANSWERS · MIXED REVISION MAT 5

# Mixed topics

**1** **63 cm²**

**2** **80 cm³**

**3** $4x^2 - 6x - 6x + 9$

**$= 4x^2 - 12x + 9$**

**4** $0.85^3 = 0.614125$

**£16 000**

**5** **33 – 22 = 11**

**6** $\sqrt{180^2 + 240^2} = 300$

$\tan^{-1}(\frac{240}{180}) = 53.1°$

**300 km; bearing 233.1°**

**7** $(\frac{27}{8})^{2/3} = (\frac{3}{2})^2$

$= \frac{9}{4}$

**8** $x(x + 5) = 84$

$(x + 12)(x - 7) = 0$

**7 and 12, or –12 and –7**

Mr&Mrs MATHS