GCSE HIGHER · MIXED REVISION MAT 6

Mixed topics

1 Solve

$$4(x - 3) = 2x + 6$$

2 Find the mean of

3.5, 4.2, 5.1, 6.0, 4.7

3 Show that 1.2 : 0.8 = 3 : 2.

4 A metal sphere of radius 3 cm is melted and recast as a cylinder of radius 2 cm.

Find the height of the cylinder.

5 Show that 4 is the largest integer that satisfies

$$2x - 3 \leq 6$$

6 A force gives a pressure of 150 N/m² on an area of 0.8 m².

The area is reduced by 25%.

Find the new pressure.

7 Show that

$$\frac{12}{\sqrt{6}} = 2\sqrt{6}$$

8 A box has 3 red, 5 green and 2 white counters.

Two are taken without replacement.

Find P(they are different colours).

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Mixed topics

1 $4x - 12 = 2x + 6$

$x = 9$

2 $23.5 \div 5$

4.7

3 × 10: 12 : 8

3 : 2

4 Sphere 36π

$4\pi h = 36\pi$

9 cm

5 $x \leq 4.5$

The largest integer is 4.

6 Force 120 N, new area 0.6 m²

200 N/m²

7 $\frac{12\sqrt{6}}{6}$

$= 2\sqrt{6}$

8 $P(\text{same}) = \frac{6 + 20 + 2}{90} = \frac{28}{90}$

$\frac{62}{90} = \frac{31}{45}$