GCSE HIGHER · REVISION MAT 4

Estimation

1 Estimate

$$21.7 + 38.4 \times 1.9$$

2 Estimate

$$\frac{8.9 \times 31.2}{0.21}$$

3 Sam estimates 4.8×6.1 as 30.

Can you tell from the rounding whether the exact answer is more or less than 30? Explain.

4 A car does 41 miles per gallon.

A journey is 395 miles.

Fuel costs £6.80 per gallon.

Estimate the fuel cost.

5 Estimate

$$\sqrt[3]{65} \times 2.98$$

6 A wheel has diameter 69 cm.

Estimate how far it travels in 1000 turns, in km.

7 Estimate

$$\frac{0.0391 \times 612}{0.207}$$

8 A classroom is 9 m by 7 m by 3 m.

1 m^3 of air has a mass of 1.2 kg.

Estimate the mass of air in the room.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 4

Estimation

1 $20 + 40 \times 2$

≈ 100

2 $\frac{9 \times 30}{0.2} = \frac{270}{0.2}$

≈ 1350

3 One number was rounded up and one down.

No; in fact it is 29.28 (less).

4 $400 \div 40 = 10$ gallons

$10 \times £7$

≈ £70

5 4×3

≈ 12

6 Circumference $\approx 3 \times 70 = 210$ cm

210 000 cm

≈ 2 km

7 $\frac{0.04 \times 600}{0.2} = \frac{24}{0.2}$

≈ 120

8 $9 \times 7 \times 3 \approx 200$ m³

200×1.2

≈ 240 kg

Mr&Mrs MATHS