3.11 Proportional Reasoning Problem Set: 10-minute Pack

Calculators not allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A garden centre sells potting compost in 3 sizes. The masses are in the ratio 4:6:9. If the smallest bag is 4 kg, what is the mass of the largest bag?

(3)

---

2 A computer game applies a 15% discount then adds 5% VAT to the discounted price. If the original price is £40, work out the final price after discount and VAT. Give your answer to the nearest penny.

(2)

---

3 A mechanic charges labour and parts in the ratio 7:3. If a job costs £280 in total, how much is charged for parts? Show your working.

(3)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 3.11 Proportional Reasoning Problem Set: 10-minute Pack

Question 1

Find scale factor: smallest corresponds to 4 parts = 4 kg so 1 part = 1 kg	**M1**
Largest 9 parts = 9 x 1 = 9 kg	**M1**
9 kg cao	**A1**

Answer: **9 kg**

Question 2

Apply 15% discount: 40 x 0.85 = 34.00	**M1**
Add 5% VAT: 34.00 x 1.05 = 35.70 cao	**A1**

Answer: **£35.70**

Question 3

Total parts 7+3 = 10, one part = 280/10 = 28	**M1**
Parts cost 3 x 28 = 84	**M1**
£84 cao	**A1**

Answer: **£84**

© Revision Library | revisionlibrary.co.uk