Year 4 maths: Scaling recipes and maps (Hard)

Maths · Number
Level: Hard

Student: _____ Date: _____

Instructions
- There are 10 questions. Read each one carefully.
- Write your answers on this paper. Use the space under a question to work it out.
- A grown-up can read a question aloud — that's fine.
- The answers are at the end. Check them together when you have finished.

Questions

1. A chef cuts 15 lemons into quarters. Each drink needs 3 quarters. How many drinks can she make?

Answer: ☐ drinks

Working:

2. A train travels 15 km every 10 minutes. How far does it travel in 30 minutes?

Answer: ☐ km

Working:

3. On a bushwalk map, 5 cm shows 2 km. The hut is 8 km along the track. How long is the track on the map?

Circle one answer.

○ **A** 20 cm ○ **B** 16 cm ○ **C** 11 cm ○ **D** 8 cm ○ **E** 40 cm

4. A farm map uses 2 cm for every 50 m. The dam is 7 cm from the shed on the map. How many metres is that?

Answer: ☐ m

Working:

5. A tractor uses 12 L of diesel every 3 hours. How many litres does it use in 8 hours?

Circle one answer.

○ **A** 96 L ○ **B** 17 L ○ **C** 32 L ○ **D** 4 L ○ **E** 24 L

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6. A bracelet is threaded in a repeating pattern: 4 yellow beads, 3 green beads, then 1 black bead. It has 72 beads. How many green beads are there?

Circle one answer.

○ **A** 9 ○ **B** 24 ○ **C** 3 ○ **D** 27 ○ **E** 36

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7. A garden path repeats this pattern of tiles: 2 grey, 5 white, 3 red. There are 90 tiles. How many white tiles are there?

Circle one answer.

○ **A** 45 ○ **B** 27 ○ **C** 9 ○ **D** 18 ○ **E** 30

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8. A small jug holds 240 mL. A big jug holds 2.5 times as much. How much do the two jugs hold altogether?

Circle one answer.

○ **A** 360 mL ○ **B** 720 mL ○ **C** 600 mL ○ **D** 960 mL ○ **E** 840 mL

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9. A card is 6 cm long and 4 cm wide. It is enlarged so that its perimeter is 60 cm. What is the area of the enlarged card?

Circle one answer.

○ **A** 180 cm² ○ **B** 216 cm² ○ **C** 72 cm² ○ **D** 48 cm² ○ **E** 24 cm²

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10. Cherries cost $16 per kilogram. Ms Nguyen buys 2 kg 500 g of cherries. How much does she pay?

Circle one answer.

○ **A** $24 ○ **B** $32 ○ **C** $37 ○ **D** $48 ○ **E** $40

Answer key

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1. 20 drinks

15 × 4 = 60 quarters. 60 ÷ 3 = 20 drinks.

2. 45 km

30 minutes is 3 lots of 10. 3 × 15 = 45 km.

3. A — 20 cm

8 km is 4 lots of 2 km, so 4 lots of 5 cm = 20 cm.

4. 175 m

1 cm is 25 m. 7 × 25 = 175 m.

5. C — 32 L

In 1 hour it uses 12 ÷ 3 = 4 L. In 8 hours: 8 × 4 = 32 L.

6. D — 27

One repeat has 4 + 3 + 1 = 8 beads. 72 ÷ 8 = 9 repeats. 9 × 3 = 27 green beads.

7. A — 45

One repeat has 2 + 5 + 3 = 10 tiles. 90 ÷ 10 = 9 repeats. 9 × 5 = 45 white tiles.

8. E — 840 mL

Big jug: 240 + 240 + 120 = 600 mL. Altogether: 240 + 600 = 840 mL.

9. B — 216 cm²

The old perimeter is 6 + 4 + 6 + 4 = 20 cm. 60 is 3 times 20, so every side is 3 times as long: 18 cm by 12 cm. Area: 18 × 12 = 216 cm².

10. E — $40

2 kg costs 2 × $16 = $32. 500 g is half a kilogram: $8. $32 + $8 = $40.