



## Multi-step ratio problems

GRADE 7 MATH

Name \_\_\_\_\_

Date \_\_\_\_\_

Work in order. Find the unit rate or the scale factor first, and show it. One skill: **multi-step ratio problems**.

### WORKED EXAMPLE

Two reliable routes. **Unit rate**: find the value of one, then multiply. **Scale factor**: find what the quantity was multiplied by, then multiply the other by the same. For a ratio sharing a total, add the parts first to find what **one part** is worth.

1. 2 pens cost \$3. What do 8 pens cost?

FLUENCY

Show your thinking

Answer

2. 5 metres of rope cost \$40. What does 1 metre cost?

FLUENCY

Show your thinking

Answer

3. Using that, what do 9 metres cost?

FLUENCY

Show your thinking

Answer

4. A machine packs 7 kg in 21 minutes. How long for 10 kg?

APPLICATION

Show your thinking

Answer

5. A student answers question 4 by adding 3 to both numbers, getting 24 minutes. Compute what they did, then say what is wrong with it.

REASONING

Show your thinking

Answer

6. Show that 24 minutes cannot be right, using the rate per kilogram.

REASONING

Show your thinking

Answer

7. Two prizes are shared in the ratio 4 : 7. The total is \$33. What is the smaller share?

APPLICATION

Show your thinking

Answer

8. What is the larger share?

APPLICATION

Show your thinking

Answer

9. Show your two shares are correct in two different ways.

REASONING

Show your thinking

Answer