



# Multi-step problems with rational numbers

**GRADE 7 MATH**

Name \_\_\_\_\_

Date \_\_\_\_\_

Work in order. Write your estimate in the box **before** calculating. One skill: **multi-step problems with rational numbers**.

**WORKED EXAMPLE**

Estimate first with friendly numbers, then calculate, then compare. If the answer is far from the estimate, one of the two is wrong — and finding out which is the point. Convert between fractions and decimals whichever way makes the arithmetic easier.

1. Four items cost \$7.25 each. Find the total.

**FLUENCY**

Show your thinking

**Answer**

2. Take 10% off that total. What is the new price?

**APPLICATION**

Show your thinking

**Answer**

3. A tank holds 60 litres and is  $\frac{3}{4}$  full. How many litres are in it?

FLUENCY

Show your thinking

Answer

4. How many litres would fill it?

FLUENCY

Show your thinking

Answer

5. Find  $-8.5 - (-3\frac{1}{4})$ . Give your answer as a fraction.

APPLICATION

Show your thinking

Answer

6. Estimate  $2.4 \times 1.5$  using friendly numbers, and write your estimate down.

APPLICATION

Show your thinking

Answer

7. Now calculate  $2.4 \times 1.5$  exactly.

APPLICATION

Show your thinking

Answer

8. Is your exact answer above or below your estimate? Explain why that happened.

REASONING

Show your thinking

Answer

9. A prize of \$96 is split equally between 5 people. Give the exact share, then explain why an estimate of \$20 each was useful even though it was not exact.

REASONING

Show your thinking

Answer