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A. Why do you think Calvin chose to compare 8.6 kg of soil with 6 kg and 9 kg?

B. How did Calvin know there would be less than 1 kg of compost in each bag?

C. How could thinking of 2.5 as about 24 tenths help Calvin estimate?

D. About how many tenths of a kilogram of compost should Calvin put in each bag? Explain how you know.

Reflecting

E. What could you multiply to check each estimate? Explain your thinking.

F. Why did it make sense for Calvin to estimate the amount of soil in each pail using a whole number of kilograms, but the amount of compost in each bag using decimal tenths?

Checking

1. Which quotients are between 3 and 4?

a) $12.6 \div 5$

b) $15.38 \div 5$

c) $10.92 \div 3$

d) $32.56 \div 8$

2. Estimate each quotient. Explain your estimate for part a).

a) $4.4 \div 6$

b) $65.66 \div 7$

Practising

3. As of 2008, Robert Wadlow was the tallest man who has ever lived. He was 2.72 m tall. Usually the height of an adult's head is $\frac{1}{7}$ of his body height. Estimate the height of Robert Wadlow's head.

4. Why is it convenient to think of 1.4 as close to 15 tenths to estimate $1.4 \div 5$?

5. Each quotient is missing a decimal point. Determine where the decimal point should be placed. Explain one answer.

a) $52.4 \div 4 = 131$

b) $47.1 \div 3 = 157$

c) $16.68 \div 6 = 278$

d) $12.06 \div 9 = 134$

6. Which quotients are between 5 and 6? Explain your thinking.

a) $49.5 \div 9$

b) $43.96 \div 7$

c) $42.7 \div 6$

d) $47.142 \div 8$

7. Each length of ribbon is cut into the given number of pieces. Estimate the length of each piece. Explain your thinking.

a) 8.28 m cut into five equal pieces

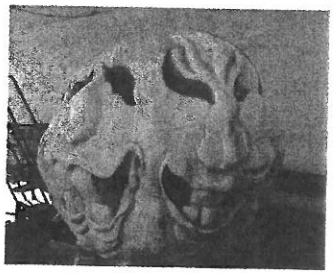
b) 1.345 m cut into four equal pieces

c) 1.52 m cut into eight equal pieces.

8. Create a problem you might solve by estimating $51.6 \div 8$.

9. Copy the division expression below. Place the digits 4, 5, and 6 in the boxes and estimate the quotient. Try different ways of placing the digits. (3 ways) What different estimates might you get?

3. ÷



10. In 2005, this jack-o'-lantern was the largest ever grown. It had a mass of 666.32 kg.

a) If eight people lifted this jack-o'-lantern equally, estimate the mass that each person would have to lift.

b) How could you check your estimate by multiplying?

11. How is estimating $17.7 \div 7$ the same as estimating $1.7 \div 7$? How is it different?