Unit 5 Lesson 3: Using Equations to Solve Problems

1 Number Talk: Quotients with Decimal Points (Warm up)

Student Task Statement

Without calculating, order the quotients of these expressions from least to greatest.

$42.6 \div 0.07$

$42.6 \div 70$

$42.6 \div 0.7$

$426 \div 70$

Place the decimal point in the appropriate location in the quotient: $42.6 \div 7 = 608571$

Use this answer to find the quotient of *one* of the previous expressions.

2 Concert Ticket Sales

Student Task Statement

A performer expects to sell 5,000 tickets for an upcoming concert. They want to make a total of $311,000 in sales from these tickets.

1. Assuming that all tickets have the same price, what is the price for one ticket?

2. How much will they make if they sell 7,000 tickets?

3. How much will they make if they sell 10,000 tickets? 50,000? 120,000? a million? x tickets?

4. If they make $404,300, how many tickets have they sold?

5. How many tickets will they have to sell to make $5,000,000?

3 Recycling

Student Task Statement

Aluminum cans can be recycled instead of being thrown in the garbage. The weight of 10 aluminum cans is 0.16 kilograms. The aluminum in 10 cans that are recycled has a value of $0.14.

1. If a family threw away 2.4 kg of aluminum in a month, how many cans did they throw away? Explain or show your reasoning.

2. What would be the recycled value of those same cans? Explain or show your reasoning.

3. Write an equation to represent the number of cans c given their weight w.

4. Write an equation to represent the recycled value r of c cans.

5. Write an equation to represent the recycled value r of w kilograms of aluminum.