Unit 4 Lesson 9: More and Less than 1%

1 Number Talk: What Percentage? (Warm up)

Student Task Statement

Determine the percentage mentally.
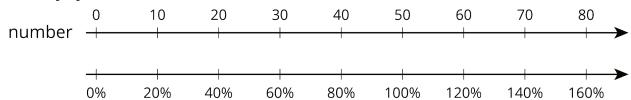
10 is what percentage of 50?

5 is what percentage of 50?

1 is what percentage of 50?

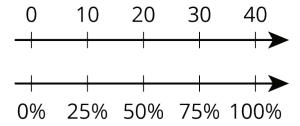17 is what percentage of 50?

Activity Synthesis

2 Waiting Tables

Student Task Statement

During one waiter's shift, he delivered 13 appetizers, 17 entrées, and 10 desserts.

1. What percentage of the dishes he delivered were:

    a. desserts?

    b. appetizers?

    c. entrées?

2. What do your percentages add up to?

number of dishes delivered

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    0    10    20    30    40
    +----+----+----+----+->

    +----+----+----+----+->
   0%  25%  50%  75% 100%
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3 Fractions of a Percent

Student Task Statement

1. Find each percentage of 60. What do you notice about your answers?
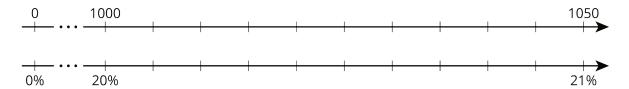
   30% of 60   3% of 60   0.3% of 60   0.03% of 60

2. 20% of 5,000 is 1,000 and 21% of 5,000 is 1,050. Find each percentage of 5,000 and be prepared to explain your reasoning. If you get stuck, consider using the double number line diagram.

   a. 1% of 5,000

   b. 0.1% of 5,000

   c. 20.1% of 5,000

   d. 20.4% of 5,000

3. 15% of 80 is 12 and 16% of 80 is 12.8. Find each percentage of 80 and be prepared to explain your reasoning.

    a. 15.1% of 80

    b. 15.7% of 80

4 Population Growth (Optional)

Student Task Statement

1. The population of City A was approximately 243,000 people, and it increased by 8% in one year. What was the new population?

2. The population of city B was approximately 7,150,000, and it increased by 0.8% in one year. What was the new population?