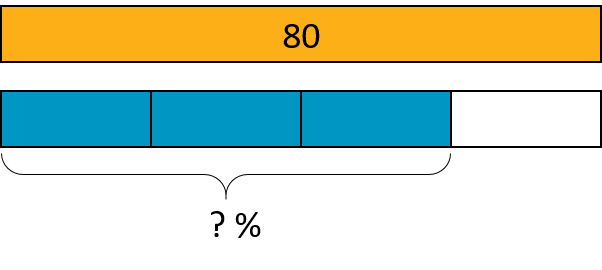
## Unit 2 Lesson 21: Percentages and Tape Diagrams

### 1 Notice and Wonder: Tape Diagrams (Warm up)

#### Student Task Statement

What do you notice? What do you wonder?

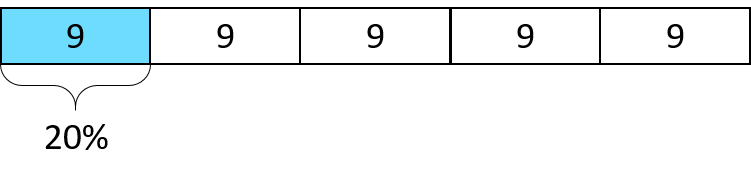


### 2 Revisiting Jada's Puppy

#### Student Task Statement

Jada has a new puppy that weighs 9 pounds. It is now at about 20% of its adult weight.

1. Here is a diagram that Jada drew about the weight of her puppy.

* 
  1. The adult weight of the puppy will be 45 pounds. How can you see that in the diagram?
  2. What fraction of its adult weight is the puppy now? How can you see that in the diagram?

1. Jada’s friend has a dog that weighs 90 pounds. Here is a diagram Jada drew that represents the weight of her friend’s dog and the weight of her puppy.

* 
  1. How many times greater is the dog’s weight than the puppy’s?
  2. Compare the weight of the puppy and the dog using fractions.
  3. Compare the weight of the puppy and the dog using percentages.

#### Activity Synthesis





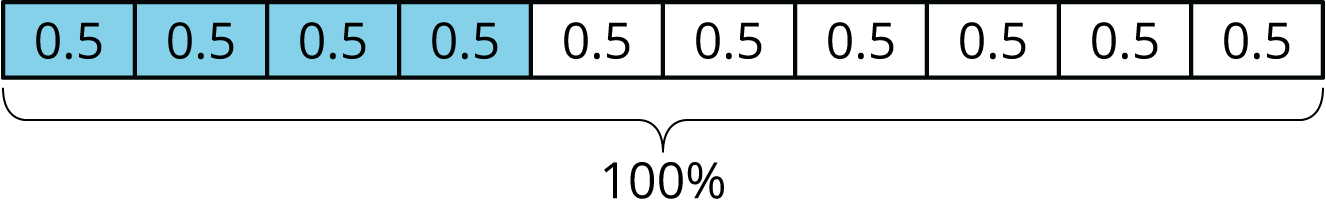
### 3 5 Dollars

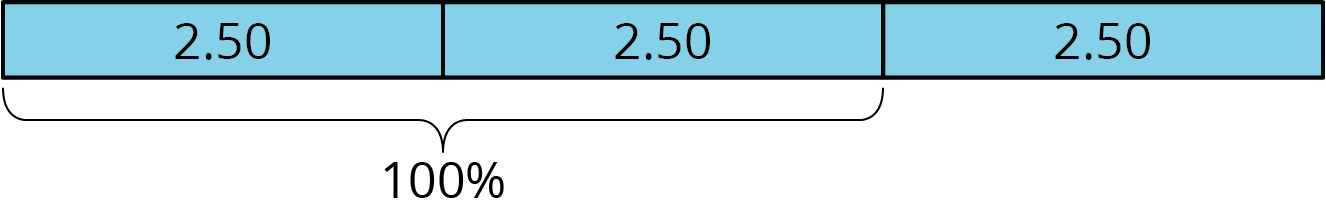
#### Student Task Statement

Noah has $5.

* 1. Elena has 40% as much as Noah. How much does Elena have?
  2. Compare Elena’s and Noah’s money using fractions. Draw a diagram to illustrate.
  3. Diego has 150% as much as Noah. How much does Diego have?
  4. Compare Diego’s and Noah’s money using fractions. Draw a diagram to illustrate.

#### Activity Synthesis





### 4 Staying Hydrated (Optional)

#### Student Task Statement

During the first part of a hike, Andre drank 1.5 liters of the water he brought.

1. If this is 50% of the water he brought, how much water did he bring?
2. If he drank 80% of his water on his entire hike, how much did he drink?



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