

Name: \_\_\_\_\_

# Finding the Whole Using Tape Diagrams

**Example:** Thirty percent of the group likes chocolate ice cream the best. If 60 people picked chocolate, how many people were in the group?

**Step 1:** Since we are working with 30%, it might be easiest to look at the whole group broken into 10s.

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**Step 2:** Label the bottom with the percents.

**Step 3:** At 30%, label 60 people on the top.

**Step 4:** Divide 60 by 3 to find out what would be at the 10% mark.  $60 \div 3$  \_\_\_\_\_.

**Step 5:** You can label this amount above the 10% mark and then count up by the same number until you get to 100%.

**Step 6:** The number at 100% represents the whole group that was questioned. \_\_\_\_\_

1. A survey was conducted and the results showed that 75% of the group voted for vanilla ice cream. If 900 people voted for vanilla, how many were surveyed? Draw a tape diagram to represent your answer.

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2. At the local ice cream shop, 36 people ordered a waffle cone. If this represents 90% of the customers that visited the shop that day, how many total customers did they serve? Draw a tape diagram to represent your answer.

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3. 80% of the kids at a birthday party wanted sprinkles on their ice cream sundae. If 16 kids wanted sprinkles, how many kids were at the birthday party?

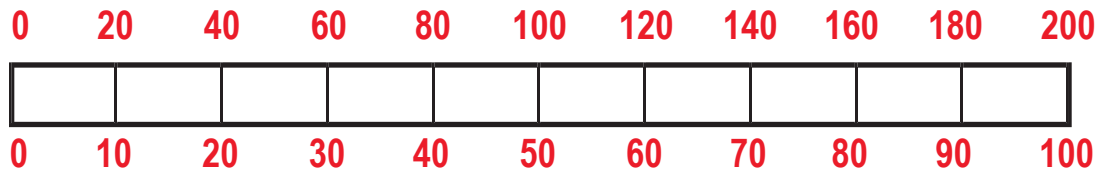
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**Step 1:** Since we are working with 30%, it might be easiest to look at the whole group broken into 10s.



**Step 2:** Label the bottom with the percents.

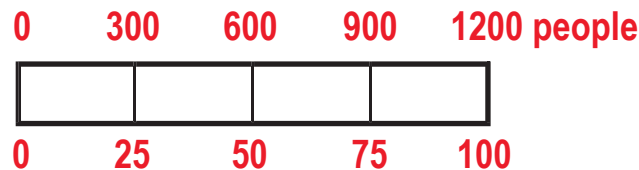
**Step 3:** At 30%, label 60 people on the top.

**Step 4:** Divide 60 by 3 to find out what would be at the 10% mark.  $60 \div 3 = 20$ .

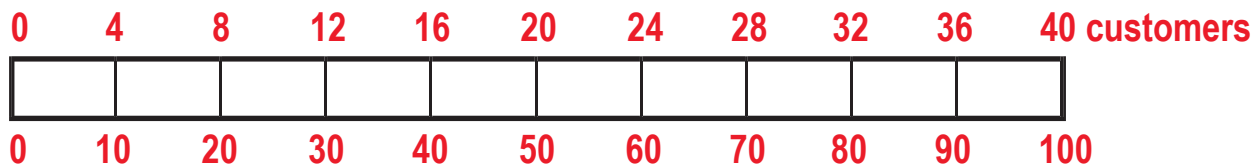
**Step 5:** You can label this amount above the 10% mark and then count up by the same number until you get to 100%.

**Step 6:** The number at 100% represents the whole group that was questioned. 200 people

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