Grade 2  
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Unit 4, Lesson 12

# Equations with Unknowns

* Let’s represent addition and subtraction with number lines and with equations using a ? for the unknown.

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## Warm-upTrue or False: Making Tens

Decide if each statement is true or false. Be prepared to explain your reasoning.

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## Activity 1 Number Line Riddles

Solve each riddle to find the mystery number.

For each riddle:

* Write an equation that represents the riddle. Write a ? for the unknown.
* Represent the equation on the number line. Write the mystery number.

1. I started at 15 and jumped 17 to the right. Where did I end?

* Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Mystery number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. I started at a number and jumped 20 to the left. I ended at 33. Where did I start?

* Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Mystery number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. I started at 42 and ended at 80. How far did I jump?

* Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Mystery number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. I started at 76 and jumped 27 to the left. Where did I end?

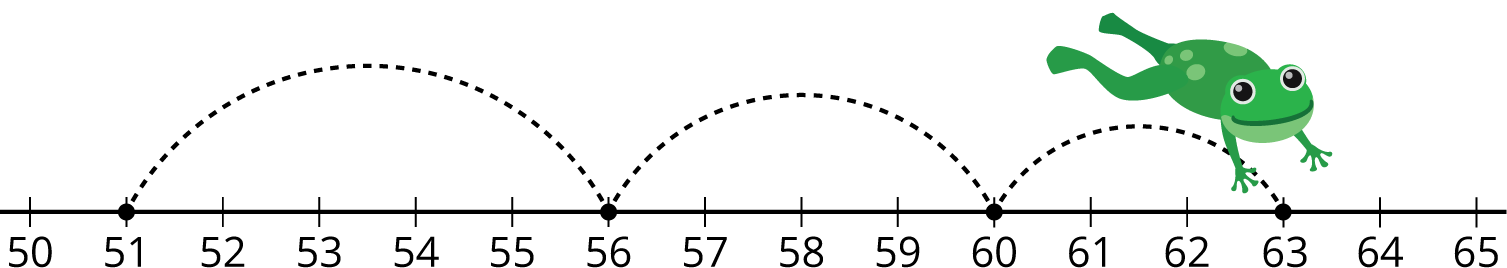
* Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Mystery number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. I started at a number and jumped 19 to the right. I ended at 67. Where did I start?

* Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Mystery number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. I started at 92 and ended at 33. How far did I jump?

* Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Mystery number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



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## Activity 2Make the Equations True

Find the number that makes each equation true.

Show your thinking using a number line.