

Hop Along Numbers

Show lengths from zero, then draw addition and subtraction hops.

GRADE 2 • 2.MD.B.6

CCSS.Math.Content.2.MD.B.6 "Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2,..., and represent whole-number sums and differences within 100 on a number line diagram."

NAME _____

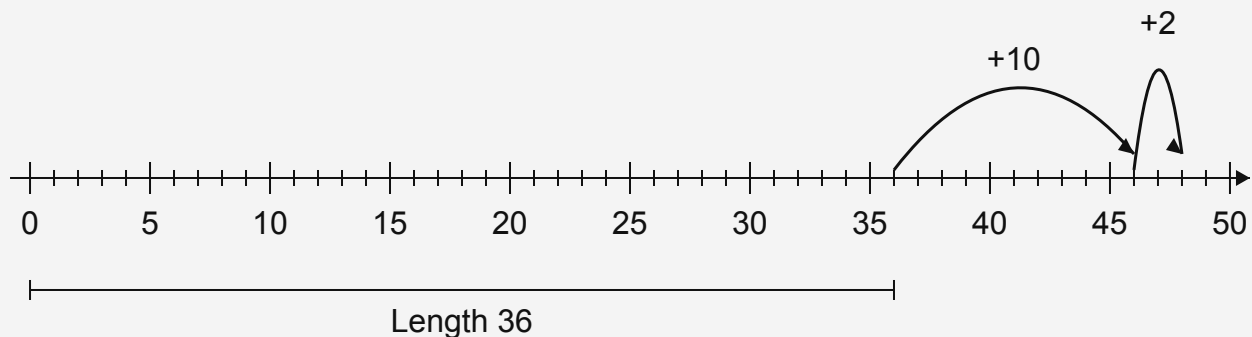
DATE _____

LENGTHS AND HOPS

Every small space on these number lines is 1 unit. A number tells its length from 0: 8 is 8 spaces from 0. Start addition or subtraction at the first number, then hop right to add or left to subtract; count spaces, not tick marks.

WORKED EXAMPLE

Show $36 + 12$. The line below the axis shows 36 as a length from 0. The arrows above show adding 12.



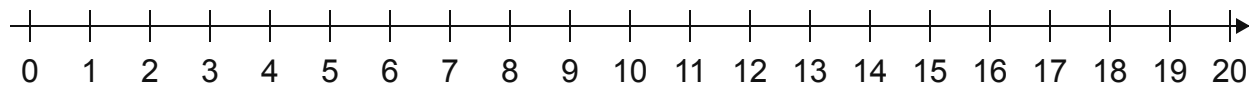
1. Find 36 by counting one small space past 35.
2. Hop right 10 to 46, then right 2 to 48.
3. $10 + 2 = 12$, so $36 + 12 = 48$.

Answer: 48

PRACTICE 4 problems

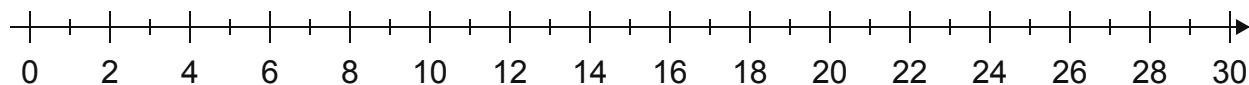
For Practice and Apply It: circle the starting number; show its length from 0 below the line; draw and label the hop above; circle the end; write the equation on the answer line. Every small space is 1 unit.

- 1 Show $8 + 6$ on the number line.



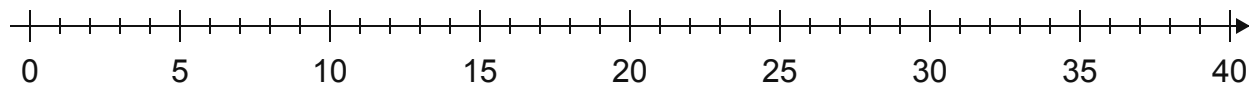
ANSWER _____

- 2 Show $27 - 9$ on the number line.



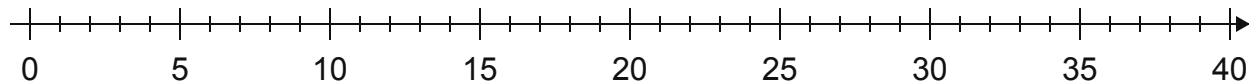
ANSWER _____

- 3 Ben has 23 stickers and gets 7 more. Show how many he has now.



ANSWER _____

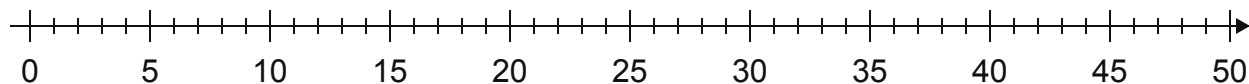
- 4** There are 30 balloons. Then 11 pop. Show how many are left.



ANSWER _____

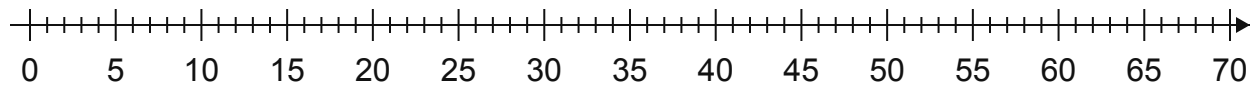
APPLY IT Show your work

- 1** Mia's game piece starts at 41 and moves right 6 spaces. Show where it lands.



ANSWER _____

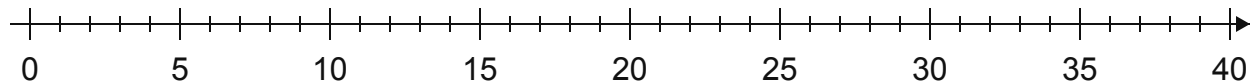
- 2** A turtle is 68 units from 0. It crawls left 7 units. Show where it stops.



ANSWER _____

CHALLENGE One step up

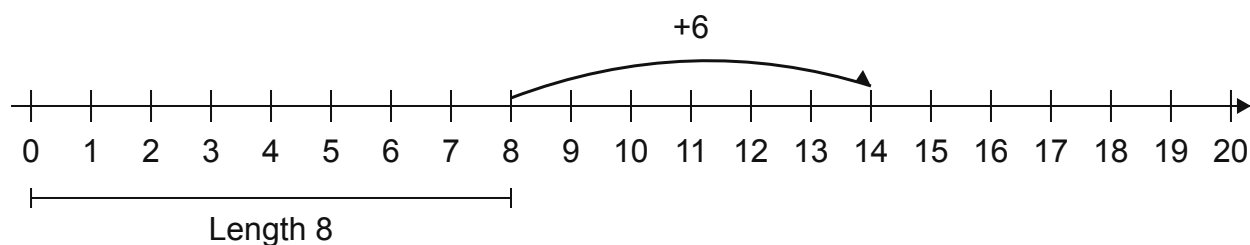
A snail hops right 9 units and lands at 34. Circle 34. Draw a hop left 9 to find its start. Below the line, show the starting number as a length from 0. Write the starting number.



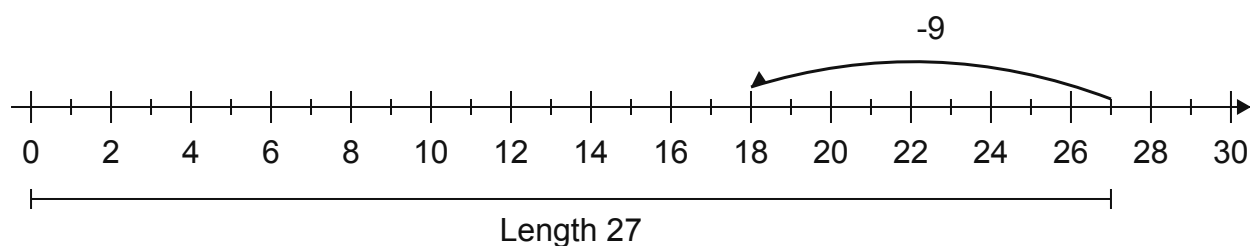
ANSWER _____

PRACTICE 1

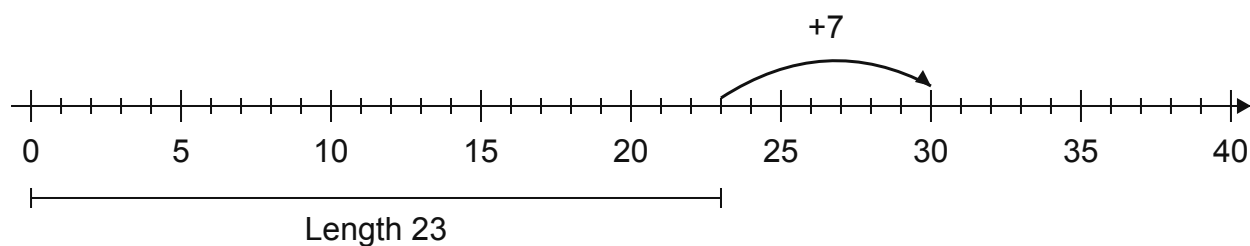
$8 + 6 = 14$. Length from 0 to 8; hop from 8 to 14.

**PRACTICE 2**

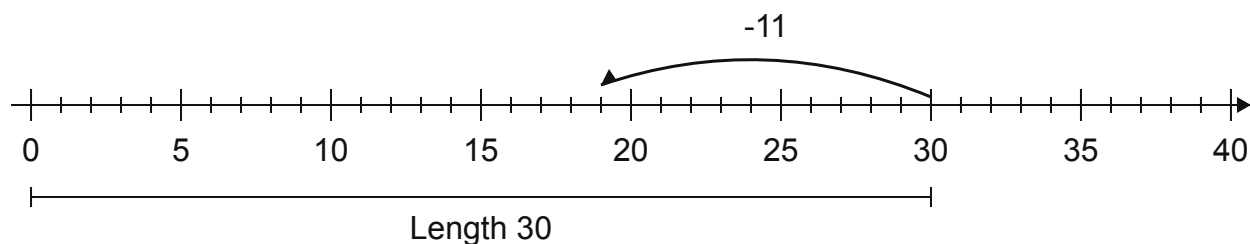
$27 - 9 = 18$. Length from 0 to 27; hop from 27 to 18.

**PRACTICE 3**

$23 + 7 = 30$ stickers. Length from 0 to 23; hop from 23 to 30.

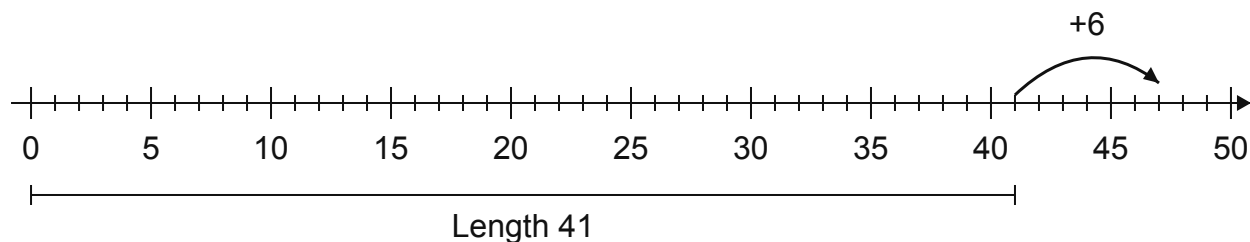
**PRACTICE 4**

$30 - 11 = 19$ balloons. Length from 0 to 30; hop from 30 to 19.



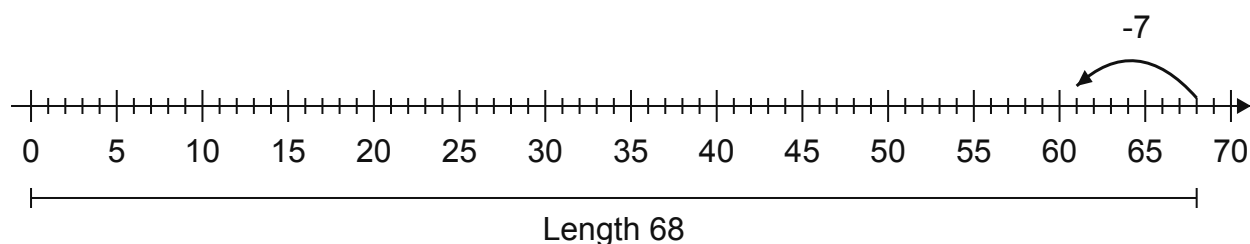
APPLY IT 1

$41 + 6 = 47$. The length from 0 to 41 is 41 units. A rightward hop of 6 ends at 47.



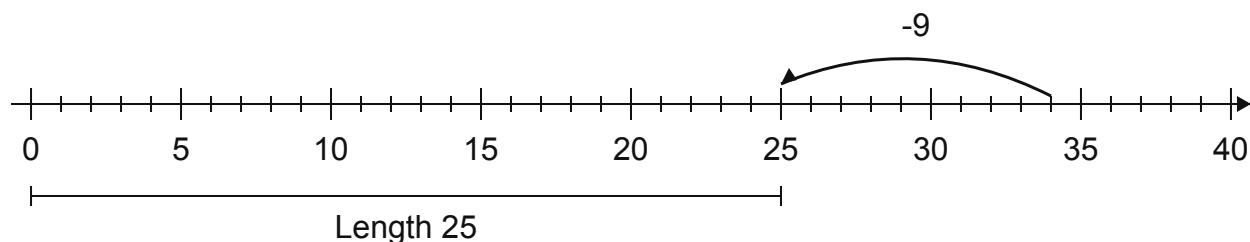
APPLY IT 2

$68 - 7 = 61$. The starting length is 68 units. A leftward hop of 7 ends at 61.



CHALLENGE

The start is 25, because $34 - 9 = 25$ and $25 + 9 = 34$. Show a length from 0 to 25 below the line.



WHAT TO CHECK

Every tick is one whole number; only selected ticks are numbered on longer lines. Check accurate starting points, equal-unit counts, hop direction, endpoints, equations and lengths measured from 0. Accept one labeled hop or equivalent smaller hops, with arrows and amounts. The worked model decomposes 12 into 10 and 2. For the challenge, the reverse hop starts at 34, while the requested starting length is 25. Diagrams are not physical rulers: one number-line unit need not equal one centimeter.