

Integer Trail Map

Read, model, and locate integers.

GRADE 6 • 6.NS.2.a

6.NS.2.a "Represent integers (e.g., number lines, concrete materials, pictorial models), including models derived from contextual situations, and identify an integer represented by a point on a number line."

NAME _____

DATE _____

READ NUMBER LINES

Each tick on a number line is the same distance from the next tick. Numbers increase as you move right and decrease as you move left. A point on a tick represents the integer at that location.

WORKED EXAMPLE

What integer does point J represent? -30 | -25 | -20 | J | -10

1. Each tick increases by 5 as you move right.
2. J is one tick to the right of -20.
3. $-20 + 5 = -15$.

Answer: J represents -15.

PRACTICE 6 problems

- 1** What integer does point P represent? -13 | -11 | P

ANSWER _____

- 2** What integer does point R represent? -16 | -12 | R | -4

ANSWER _____

- 3** A point is 6 units to the left of -2 on a number line. What integer does it represent?

ANSWER _____

- 4** The tick marks are 3 units apart. What integer does S represent? -13 | -10 | -7 | S | -1

ANSWER _____

- 5** A model has 9 negative counters and 2 positive counters. What integer does the model represent?

ANSWER _____

- 6** A point is 4 units to the right of 7 on a number line. What integer does it represent?

ANSWER _____

APPLY IT Show your work

- 1** In a video game, Kai starts a round with -6 energy points because of a penalty. Kai then earns 14 energy points. What integer represents Kai's energy total? Show the change on a number line.

WORK SPACE

ANSWER _____

- 2** A camera drone is 4 meters below rooftop level. Rooftop level is 0. The drone rises 11 meters. What integer represents the drone's new position compared with rooftop level? Show the change on a number line.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

The tick marks on a number line are 6 units apart. Point A is at -17. Point B is three ticks to the right of A. What integer does B represent? Explain how you know.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	What integer does point P represent? -13 -11 P	-9
2	What integer does point R represent? -16 -12 R -4	-8
3	A point is 6 units to the left of -2 on a number line. What integer does it represent?	-8
4	The tick marks are 3 units apart. What integer does S represent? -13 -10 -7 S -1	-4
5	A model has 9 negative counters and 2 positive counters. What integer does the model represent?	-7
6	A point is 4 units to the right of 7 on a number line. What integer does it represent?	11

PART 2 • APPLY IT

- 8** Start at -6 and move 14 units right. $-6 + 14 = 8$.
- 7** Start at -4 and move 11 units right. $-4 + 11 = 7$.

CHALLENGE

- Three ticks of 6 units is 18 units, and $-17 + 18 = 1$.**

Accept a correct number-line model with equal intervals and arrows or jumps in either word problem. For the challenge, accept an explanation that shows three jumps of 6 or adds 18 to -17.