Key

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# Unit 7, Lesson 3: Comparing Positive and Negative Numbers

1. Decide whether each inequality statement is true or false. Explain your reasoning.

a. $-5 > 2$ False more left on number line, below 0

b. $3 > -8$ True, 3 is to the right of 0

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c. $-12 > -15$ True, -12 is less negative, only 12 units from 0 compared to -15 which is 15 units

d. $-12.5 > -12$ False -12 is less negative, only 12 units to the left of compared to 12.5 for -12.5

2. Here is a true statement: $-8.7 < -8.4$. Select **all** of the statements that are equivalent to $-8.7 < -8.4$.

A. -8.7 is further to the right on the number line than -8.4. No

B. -8.7 is further to the left on the number line than -8.4. Yes

C. -8.7 is less than -8.4. Yes

D. -8.7 is greater than -8.4. No

E. -8.4 is less than -8.7. No

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F. -8.4 is greater than -8.7. Yes

3. The table shows five states and the lowest point in each state.

| state | lowest elevation (feet) |
|---|---|
| California | -282 |
| Colorado | 3350 |
| Louisiana | -8 |
| New Mexico | 2842 |
| Wyoming | 3099 |

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-282 CA
-8 LO
2842 NM
3099 WY
3350 CO

Put the states in order by their lowest elevation, from least to greatest.
(from Unit 7, Lesson 4)

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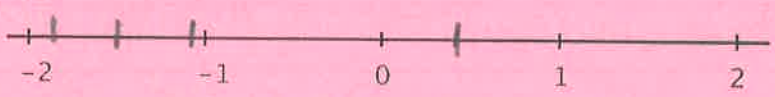
4. Plot each of the following numbers on the number line. Label each point with its numeric value.

0.4, -1.5, $-1\frac{7}{10}$, $-\frac{11}{10}$ $-1\frac{1}{10}$

$-1\frac{7}{10}$ -1.5 $-1\frac{1}{10}$ .4

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(from Unit 7, Lesson 2)

5. Each lap around the track is 400 meters.

a. How many meters does someone run if they run:

2 laps? $400 \times 2 = 800$ m

5 laps? $400 \times 5 = 2000$ m

$x$ laps? $400x$

b. If Noah ran 14 laps, how many meters did he run? $400 \times 14 = 1600$ m

c. If Noah ran 7,600 meters, how many laps did he run? $400x = 7600$

$400 \overline{)7600}$ 19 laps

400
3600
3600

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(from Unit 6, Lesson 6)

6. A stadium can seat 16,000 people at full capacity.

a. If there are 13,920 people in the stadium, what percentage of the capacity is filled? Explain or show your reasoning.

$\frac{13,920}{16,000} = .87 = 87\%$ full

b. What percentage of the capacity is not filled? $100\% - 87\% = 13\%$ not full

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(from Unit 3, Lesson 16)