

Negative Numbers, Opposites and Absolute Value

Grade 6 math · Test Answer Key · Standards: 6.NS.C.5, 6.NS.C.6a, 6.NS.C.7

Use this answer key to score each question. The scoring notes tell how to award points. Give credit for a correct method even when a small copying slip changes the final number.

Standards: 6.NS.C.5, 6.NS.C.6a, 6.NS.C.7 · **Level:** Grade 6

Question 1 Signed numbers in context (2 points)

(a) **-85** (below sea level). (b) **+120** (money earned).

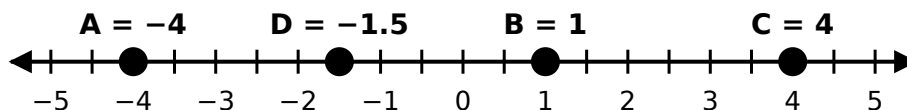
Scoring: 1 point per part.

Question 2 Opposites and absolute value (2 points)

(a) **17**. (b) -23 is 23 units from 0, so $|-23| = 23$.

Scoring: 1 point per part.

Question 3 Reading points (2 points)



A and C are opposites.

(a) **A = -4 and D = -1.5**. (b) A is 4 left of 0 and C is 4 right, so **A and C**.

Scoring: 1 point per part.

Question 4 Comparing numbers (2 points)

(a) -8 is left of -3 : **$-8 < -3$** . (b) $|-6| = 6$ and $6 > -6$: **$|-6| > -6$** .

Scoring: 1 point per part.

Question 5 Ordering rational numbers (2 points)

As decimals: -1.5 , 0.4 , -1.2 , 0.25 . Left to right: $-\frac{3}{2}$, **-1.2** , $\frac{1}{4}$, **0.4** .

Scoring: 2 points for the correct order; 1 point if exactly one number is misplaced.

Question 6 Overnight lows (3 points)

(a) The least number is -17 : **Fargo**.

(b) Greatest to least: 3 , -9 , -14 , -17 : **Denver, Bozeman, Duluth, Fargo**.

(c) $|-17| = 17$ is the largest distance from 0, so **Fargo**. Its value is far below zero, so it is the coldest, not the warmest.

Scoring: 1 point per part.

Question 7 Checking a claim (3 points)

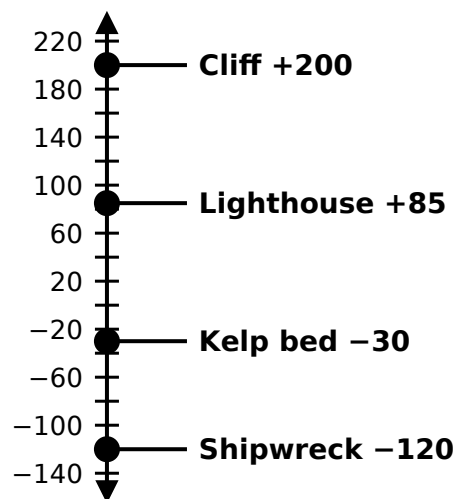
(a) **No**. On a number line -9 lies to the left of -4 , and left means less.

(b) **$-9 < -4$** .

(c) $|-9| = 9$ and $|-4| = 4$, so **-9** .

Scoring: 1 point per part.

Question 8 Above and below sea level (3 points)



Values read from the scale.

(a) **Shipwreck, kelp bed, lighthouse, cliff** (-120 , -30 , 85 , 200).

(b) Distances: 120, 30, 85, 200. The smallest is 30: **kelp bed**.

(c) The largest is 200: **cliff**.

Scoring: 1 point per part.

Question 9 Negative but greater (1 point)

Any negative number to the right of -3 works, such as -2 , -1 or -0.5 .

Scoring: 1 point for a valid number between -3 and 0 .