

Topic: Absolute value**Question:** Simplify the expression.

$$-|-3|$$

Answer choices:

A 3

B 0

C -3

D 1



Solution: C

Order of operations tells us that we have to take the absolute value of -3 first, before we apply the minus sign that's outside the absolute value bars.

Absolute value is the same as “distance from the origin,” and -3 is three units from the origin on the number line, so $|-3| = 3$. But then we still have to apply the negative sign that's outside the absolute value bars, so we get

$$-|-3| = -3$$



Topic: Absolute value**Question:** Simplify the expression.

$$|-3-2|$$

Answer choices:

A 1

B -5

C -1

D 5



Solution: D

Order of operations tells us that we have to do the computation inside the absolute value bars first. When we subtract 2 from -3 , we get -5 .

$$|-3 - 2|$$

$$|-3 - 2| = |-5|$$

Absolute value bars tell us that we need to find the distance from the origin of whatever's inside the absolute value bars. Since -5 is five units away from the origin on the number line, we get

$$|-3 - 2| = 5$$



Topic: Absolute value**Question:** Simplify the expression.

$$-|2 - 3 - 3| - |-2|$$

Answer choices:

A 6

B 2

C -6

D -4



Solution: C

Order of operations tells us that we have to do the computation inside the absolute value bars first.

$$-|2 - 3 - 3| - |-2|$$

$$-|-4| - |-2|$$

Absolute value bars tell us that we need to find the distance from the origin of whatever's inside the absolute value bars. Since the point -4 is 4 units from the origin on the number line, we get

$$-4 - |-2|$$

Since the point -2 is 2 units from the origin on the number line, we get

$$-4 - 2$$

$$-6$$

