

Translating and Picking Numbers

p.73

Find 6 less than x .
Find the product of 2 and this difference.
Find 4 more than this quantity.

1. Which of the following is the result obtained by performing the operations described above?

- ~~(A) $2(x - 2)$~~ $2x - 4$
(B) $2(x - 4)$ $2x - 8$ $2(x - 6) + 4$
(C) $2(x - 6)$
(D) $2(x + 6)$
(E) $2(x + 4)$
- $2x - 12 + 4$
 $2x - 8$

Order of Operations

p.74

It is important to use the order of operations when simplifying expressions. Test writers often design wrong answer choices to catch students who compute in the wrong order. The correct order of operations is shown below.

- First, simplify expression within grouping symbols, such as parenthesis, brackets, absolute-value bars, radicals and fraction bars.
- Next, simplify exponents
- Then, perform multiplication and division from left to right
- Finally, perform all addition and subtraction from left to right

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1. $3 \times 2 + 2 - 3 + 8 \times 2$

$$6 + 2 - 3 + 16$$

$$21$$

3. $(3 + 2)^2 - 8 \times 2$

$$5^2 - 8 \cdot 2$$

$$25 - 8 \cdot 2$$

$$25 - 16$$

$$9$$

2. $2 + 3^2 - (10 - 8)$

$$2 + 3^2 - (2)$$

$$2 + 9 - 2$$

$$9$$

4. $|4 - 6| \times 2 + 4^2 - 12 \div 2$

$$|-2| \cdot 2 + 4^2 - 12 \div 2$$

$$2 \cdot 2 + 16 - 12 \div 2$$

$$4 + 16 - 6$$

$$14$$