

Name: Class:

Identify mistakes involving the order of operations.

- a. Peter tried to evaluate the expression $24 - 12 \div 3 \times 2$. Check if Peter's work below is correct.

$$\begin{array}{l} 24 - 12 \div 3 \times 2 \\ 24 - 12 \div 6 \quad \rightarrow \text{Step 1} \\ 24 - 2 \quad \rightarrow \text{Step 2} \\ 22 \quad \rightarrow \text{Step 3} \end{array}$$

- b. Mimi tried to evaluate the expression $12 + (6 - 3) \div 3$. Check if mimi's work below is correct.

$$\begin{array}{l} 12 + (6 - 3) \div 3 \\ 12 + 3 \div 3 \quad \rightarrow \text{Step 1} \\ 15 \div 3 \quad \rightarrow \text{Step 2} \\ 5 \quad \rightarrow \text{Step 3} \end{array}$$

- c. Marie tried to evaluate the expression $70 - 10 \times (8 - 4)$. Check if marie's work below is correct.

$$\begin{array}{l} 70 - 10 \times (8 - 4) \\ 60 \times (8 - 4) \rightarrow \text{Step 1} \\ 60 \times 4 \quad \rightarrow \text{Step 2} \\ 240 \quad \rightarrow \text{Step 3} \end{array}$$

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Identify mistakes involving the order of operations.

a. Peter tried to evaluate the expression $24 - 12 \div 3 \times 2$. Check if Peter's work below is correct.

$$24 - 12 \div 3 \times 2$$

$$24 - 12 \div 6 \rightarrow \text{Step 1}$$

$$24 - 2 \rightarrow \text{Step 2}$$

$$22 \rightarrow \text{Step 3}$$

Peter made a mistake in step 1. He multiplied before he divided.

The order of operation says multiply and divide from left to right.

So, peter should have divided before multiplying

$$24 - 12 \div 3 \times 2$$

$$24 - 4 \times 2 \rightarrow \text{Divide}$$

$$24 - 8 \rightarrow \text{Multiply}$$

$$16 \rightarrow \text{Subtract}$$

b. Mimi tried to evaluate the expression $12 + (6 - 3) \div 3$. Check if mimi's work below is correct.

$$12 + (6 - 3) \div 3$$

$$12 + 3 \div 3 \rightarrow \text{Step 1}$$

$$15 \div 3 \rightarrow \text{Step 2}$$

$$5 \rightarrow \text{Step 3}$$

Mimi made a mistake in step 2. Mimi added before she divided.

The order of operation says divide before adding.

So, Mimi should have solved it like this.

$$12 + (6 - 3) \div 3$$

$$12 + 3 \div 3 \rightarrow \text{Subtract}$$

$$12 + 1 \rightarrow \text{Divide}$$

$$13 \rightarrow \text{Addition}$$

c. Marie tried to evaluate the expression $70 - 10 \times (8 - 4)$. Check if marie's work below is correct.

$$70 - 10 \times (8 - 4)$$

$$60 \times (8 - 4) \rightarrow \text{Step 1}$$

$$60 \times 4 \rightarrow \text{Step 2}$$

$$240 \rightarrow \text{Step 3}$$

Marie made mistake in step 1. She subtracted before solving the parenthesis. The order of operation says solve parenthesis first, then Multiply or divide from left to right.

So, Marie should have solved it like this

$$70 - 10 \times (8 - 4)$$

$$70 - 10 \times 4 \rightarrow \text{Solve parenthesis first}$$

$$70 - 40 \rightarrow \text{Multiply}$$

$$30 \rightarrow \text{Subtract}$$