

Assignment 2

1. The three steps shown below were used to find an expression equivalent to

$$\frac{1}{6}(36x - 48y) + 12x$$

Step 1: _____

Step 2: $18x - 18y$

Step 3: $2(9x - 4y)$

Which expression could be use at Step 1?

- A. $\frac{1}{6}(48x - 45y)$
 B. $6x - 45y + 12x$
 C. $6x - 8y + 12x$
 D. $36(x - 8y) + 12x$

2. Which expression represents a factorization of $24x + 72xy$?

- A. $8y(3 + 9x)$
 B. $8x(3 + 9y)$
 C. $8(3x + 9xy)$
 D. $8(3 + 9)xy$

work?

3. Which expression is equivalent to $25x + 65 - 29x - 5$?

$$25x - 29x + 65 - 5$$

- A. $4x - 60$
 B. $-4x + 60$
 C. $4x + 60$
 D. $-4x - 6$

4. Simplify: $3x(-5) + 4y - 3(2x) - 18y$

$$\begin{aligned} 3x(-5) + 4y - 3(2x) - 18y \\ -15x + 4y - 3(2x) - 18y \\ -15x + 4y - 6x - 18y \\ -15x + 6x + 4y + 18y \\ -9x - 14y \end{aligned}$$

5. Louis says the two expressions

$$\frac{1}{5}(25x + 15) - 7x \text{ and } -2(x - 5)$$

are equivalent. Is he correct? Explain how you know.

$$5x + 3 - 7x$$

Louis is incorrect, I know because I simplified both equations. $\frac{1}{5}(25x + 15) - 7x$ simplified is $-2x + 3$, but $-2(x - 5)$ simplified is $-2x + 10$, the two are not equivalent.

6. Jill got the expression $2x - 8$ and then wrote her answer as $8x - 2$. Is her expression an equivalent expression? How do you know?

$2x - 8$ No the 2 expressions are not equivalent.
 $4 - 8$ first of all, you can't change where the variable is, also the 8 is a -8 and the 2 is a $+2$, finally I know the 2 equations are not equivalent because I tried to verify but it wasn't the same.

7. Find the difference of $-3x + 7$ minus $2x - 8$

$$\begin{aligned} & [-3x+7] - [2x-8] \\ & -3x+7-2x+8 \\ & -3x-2x+7+8 \\ & -5x+15 \end{aligned}$$



8. Simplify: $3x - 4(x - 5y) + 14(8x - 12y)$

$$\begin{aligned} & 3x - 4(x - 5y) + 14(8x - 12y) \\ & 3x - 4x + 20y + 112x - 168y \\ & 3x - 4x + 112x + 20y - 168y \\ & -x + 112x + 20y - 168y \\ & 111x - 148y \end{aligned}$$



9. The hourly rates for a parking garage are as follows:

First hour	\$7.00
Each additional hour thereafter	\$4.25

Robyn parked her car in the garage for y hours. How much was her parking fee?

$$\begin{aligned} & \cancel{7} + [4.25(y-1)] \checkmark \\ & 7 + [4.25y - 4.25] \\ & 7 + 4.25y - 4.25 \\ & 7 - 4.25 + 4.25y \\ & 2.75 + 4.25y \checkmark \end{aligned}$$

sentence?
units?

10.

a. Freddy paid w dollars for a camera and \$120 for an additional camera lens. If the sales tax is 8%, how much did Freddy pay for the camera and lens, including the sales tax?

$$.08(\underbrace{w+120}_{\text{total}}) + [\underbrace{120+w}_{\text{total}}] \checkmark$$

sentence?

b. If the camera cost \$215, how much would Freddy spend including the sales tax.

$$\begin{aligned} & .08(215+120) + [120+215] \quad \text{Freddy would} \\ & .08(335) + 335 \quad \text{pay } 361.80 \\ & 26.8 + 335 \quad \text{dollars, for} \\ & 361.8 \quad \text{a camera and} \\ & \quad \quad \quad \text{the lens.} \checkmark \end{aligned}$$