

Determine if the following expressions are equivalent. Explain how you know.

1) $-7x - 15$ and $x + 10 - 8x - 25$

2) $-8(2 + 3x)$ and $-16 + 24x$

Factor the following expressions.

3) $6x - 15$

4) $8x + 36$

5) $7x + 15$

Simplify each expression:

6) $-42 + 21$

7) $-18 - 15$

8) $13 - 40$

9) Explain what the equal sign means in the following equation: $4 - 12 = -8$

10) Perry solved the equation below. Determine if his solution is correct. If it is not correct, find his mistake and determine the correct solution. Explain all of your thinking.

$$\begin{array}{r} -4x - 3 = -15 \\ +3 = +3 \\ \hline -4x = -12 \end{array}$$

$$\frac{-4x}{4} = \frac{-12}{4}$$

$$x = -3$$