

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

1) $-6x + 12$ and $2x + 1 - 8x + 11$

2) $-8 - 10x$ and $-16x - 2$

Simplify the following expressions

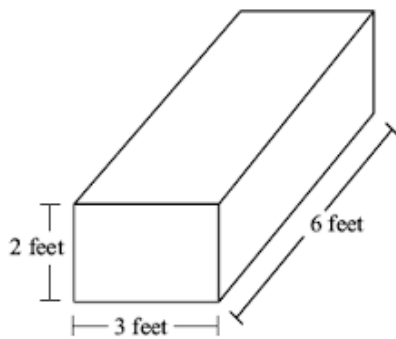
3) $3x - 9 + 17 - 12x$

4) $-5(3x + 2) - 11$

Calculate the volume of the figures below.

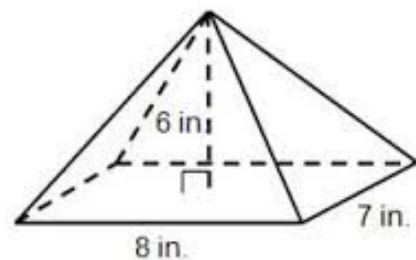
Prism: $V = Bh$

5)



Pyramid: $V = Bh \div 3$

6)



6) What is the circumference of a circle with a radius of 14 inches?

7) What is the one value that makes the following expressions equivalent?

$$3x + 6 \text{ and } 12$$

8) When solving an equation why do we need to do the same thing on both sides of the equal sign?

9) If I start with $2x - 7 + 8x + 5$, then is $10x - 2$ equivalent? How do you know?

10) If you wanted to know if teachers in Alpine School District thought that Christmas break was too short what would your population be and how would you sample it to make sure you had a random and representative sample?