

Unit 6 Lesson 18 Cumulative Practice Problems

1. For each expression, write an equivalent expression that uses only addition.

a. $20 - 9 + 8 - 7$

b. $4x - 7y - 5z + 6$

c. $-3x - 8y - 4 - \frac{8}{7}z$

2. Use the distributive property to write an expression that is equivalent to each expression. If you get stuck, consider drawing boxes to help organize your work.

a. $9(4x - 3y - \frac{2}{3})$

b. $-2(-6x + 3y - 1)$

c. $\frac{1}{5}(20y - 4x - 13)$

d. $8(-x - \frac{1}{2})$

e. $-8(-x - \frac{3}{4}y + \frac{7}{2})$

3. Kiran wrote the expression $x - 10$ for this number puzzle: "Pick a number, add -2, and multiply by 5."

Lin thinks Kiran made a mistake.

a. How can she convince Kiran he made a mistake?

b. What would be a correct expression for this number puzzle?

4. The output from a coal power plant is shown in the table:

energy in megawatts	number of days
1,200	2.4
1,800	3.6
4,000	8
10,000	20

Similarly, the output from a solar power plant is shown in the table:

energy in megawatts	number of days
100	1
650	4
1,200	7
1,750	10

Based on the tables, is the energy output in proportion to the number of days for either plant? If so, write an equation showing the relationship. If not, explain your reasoning.

(From Unit 2, Lesson 7.)