

Section 2.3 Combining Like Terms

1. Simplify the following expressions by combining like terms, if possible.

Change a-d

a. $4t + 11r$

b. $12x - 15x$

c. $6y - 5y^2$

d. $5x^2 + 3x^2$

e. $3y + y^2 - y$

f. $8x + 11x + 6x$

g. $y - 4y$

h. $\frac{1}{2}x^2 + \frac{1}{4}x^2$

i. $2.5x + 6x$

j. $y + 4y - 10y$

g. $x - 0.10x$

h. $x + 0.18x$

Section 2.4 Equations and Inequalities as True/False Statements

Checking Possible Solutions

2. Check each equation or inequality to see whether the given number is a solution.

a. Is -2 a solution to $2 + y = 0$?

b. Is 7 a solution to $5x = 32$?

c. Is -1 a solution to $3x + 4 \geq 11$?

d. Is -3 a solution to $\frac{1}{3}x < -\frac{2}{3}x$?

3. A company has a reserve fund of 38.5 million dollars. It plans to spend 5.5 million dollars each year. The expression $38.5 - 5.5x$ represents the amount of money in the fund after x years.

a. How much money is in the fund after 3 years?

b. The equation $38.5 - 5.5x = 0$ describes the number of years it will take for the reserve fund to run out of money. Is 5 a solution for this equation?

More Practice

4. Check each equation or inequality to see whether the given number is a solution.

a. Is 3 a solution to $2(t+5)=16$?

b. Is -2 a solution to $-3x+5\geq 1$?

c. Is -3 a solution to $5t+1\leq -7-t$?

d. Is -6 a solution to $y+5>1$?

5. Simplify the following expressions by combining like terms, if possible.

a. $5x+3x^3$

b. $4z-z$

c. $5.5t-5t$

d. $y+0.15y$

e. $18x-8y$

f. $x+5y-3x$

6. When a plant was purchased, it was 3.2 inches tall and it grows at a rate of 0.2 inches per day. The expression $3.2+0.2d$ represents the height of the plant after d days.
- a. How tall is the plant after 10 days?

b. The equation $3.2+0.2d=10$ describes the number of days it takes for the plant to be 10 inches tall. Is 22 a solution for this equation?

c. Challenge: Can you figure out how many days it will take the plant to reach 10 inches in height?