

1. Solve the following linear equation $-x - 5 = -4x + 3$.

A. $-\frac{32}{3}$

B. -8

C. $\frac{2}{3}$

D. $-\frac{8}{3}$

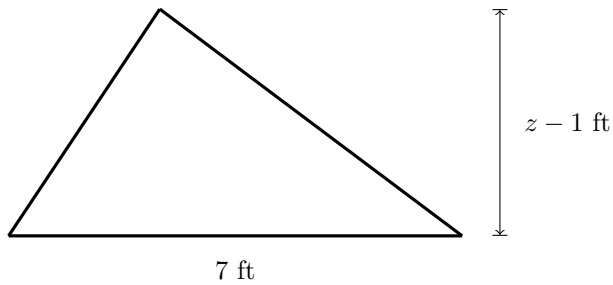
E. $-\frac{4}{3}$

F. $\frac{8}{3}$

G. $-\frac{16}{3}$

H. $-\frac{8}{9}$

2. The area of the triangle shown below is 60 ft^2 . Find the value of z and include appropriate units in your answer.



A. $\frac{635}{7} \text{ ft}^2$

B. $\frac{254}{7} \text{ ft}$

C. $\frac{381}{7} \text{ ft}$

D. $\frac{127}{35} \text{ ft}^2$

E. $\frac{127}{21} \text{ ft}^2$

F. $\frac{508}{7} \text{ ft}^2$

G. $\frac{127}{7} \text{ ft}$

H. $\frac{127}{14} \text{ ft}$

3. Solve the following linear equation $-3 + 4(-x + 2) = 5 - 2(-4x - 5)$.

A. $-\frac{5}{2}$

B. $-\frac{5}{12}$

C. $-\frac{5}{6}$

D. $-\frac{5}{3}$

E. $-\frac{5}{18}$

F. $\frac{5}{2}$

G. $\frac{10}{3}$

H. $\frac{5}{3}$

4. Solve the following linear equation $5x + 1 = -4$.

A. $-\frac{1}{4}$

B. $\frac{1}{3}$

C. -3

D. $\frac{1}{2}$

E. 1

F. -1

G. $-\frac{1}{3}$

H. 4

5. Children are often prescribed the same drugs used for adults. A commonly used formula for adjusting the dosage to account for the age of the child is Cowlings formula. Cowlings formula for a 10-year-old child is $y = 0.8x$, where x is the adult dosage and y is the child dosage. What is the adult dosage if the child dosage of a medication is 4 mg?

- A. The adult dosage is 3.2 mg.
- B. The adult dosage is 2.4 mg.
- C. The adult dosage is 1.6 mg.
- D. The adult dosage is 5 mg.
- E. The adult dosage is 10 mg.
- F. The adult dosage is 1 mg.
- G. The adult dosage is 3 mg.
- H. The adult dosage is 6 mg.

6. If six times the sum of x and three is four times the difference of x and eight, what is the value of x ?

- A. -100
- B. $-\frac{25}{3}$
- C. -75
- D. $-\frac{25}{2}$
- E. $\frac{25}{2}$
- F. 25
- G. -25
- H. 100

7. The solution to the system of linear equations $\begin{cases} y = 2x + 1 \\ y = 3x + 3 \end{cases}$ is $(-2, -3)$. Use this information to solve the linear equation $2x + 1 = 3x + 3$.

A. $x = -7$

B. $x = -2$

C. $x = -8$

D. $x = 1$

E. $x = 7$

F. $x = 2$

8. Solve the following linear equation $-(x - 3) = -2(-5)$.

A. $\frac{7}{4}$

B. $\frac{7}{3}$

C. -7

D. -28

E. $-\frac{7}{3}$

F. 14

G. 7

H. -21