

HW 1-5

Int 2

Multi-Step Equations & Inequalities – Variables on Both Sides

Unit 1

Solve each equation or inequality. Graph the solution set for inequalities.

1. $7a + 10 = 2a$

5. $\frac{3}{4}x + 17 > 2\left(\frac{5}{8}x - 34\right)$

2. $13x = 24 + 4x$

6. $3 - \frac{2}{9}b = \frac{1}{3}b - 7$

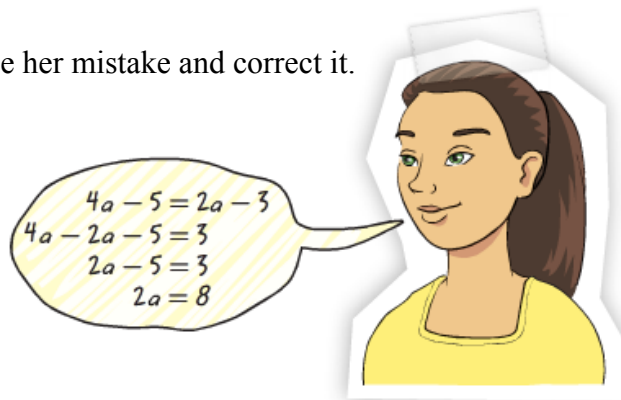
3. $11x + 3 = 24 - 4x$

7. $2(3x + 4) = 5x + 7$

4. $5p + 2 = 4p - 1$

8. $15 - \frac{1}{6}n = \frac{1}{6}n - 1$

9. Alma is solving the equation $4a - 5 = 2a - 3$. Circle her mistake and correct it.



10. What is the solution of the following equation: $5x + 7 = -3x - 9$

A. -2

C. 2

B. 1

D. 8

11. Is $m = 30$ the solution for
 $16 - \frac{3}{5}m = -2$

12. Is $r = 13$ the solution for
 $12r - 16 = 10 + 14r$

13. Is $x = -5$ the solution for
 $-7 - \frac{2}{3}x = \frac{4}{3}x + 3$

Solve each equation.

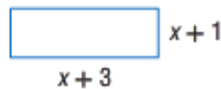
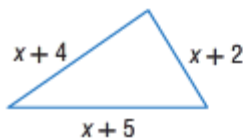
14. $-6f + 13 = 2f - 11$

15. $2.5h - 15 = 4h$

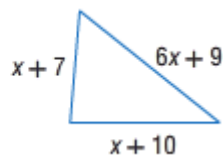
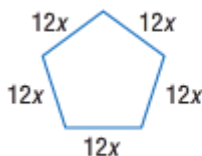
16. $2z - 31 = -9z + 24$

Write an equation to find the value of x so that each pair of polygons has the same perimeter. Then solve.

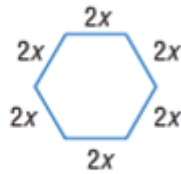
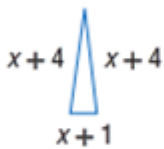
17.



18.



19. Find the value of x so that the polygons have the same perimeter.



- (A) 4
(B) 3

- (C) 2
(D) 1

20. Which of the following equations has a solution of 5?

- (F) $-12x - 6 = -10x + 4$
(G) $12x - 6 = 10x + 4$
(H) $12x + 6 = 10x - 4$
(I) $12x - 6 = 10x - 4$

21. Carpet cleaner A charges \$28.25 plus \$18 a room. Carpet cleaner B charges \$19.85 plus \$32 a room. Which equation can be used to find the number of rooms for which the total cost of both carpet cleaners is the same?

- (A) $28.25x + 18 = 19.85x + 32$
(B) $28.25 + 32x = 19.85 + 18x$
(C) $28.25 + 18x = 19.85 + 32x$
(D) $(28.25 + 18)x = (19.85 + 32)x$

Solve each equation or inequality. Graph the solution set for inequalities.

22. $8g = 3(5g - 2)$

23. $12k + 7 = 20 - 3k$

24. $8y - 3 = 6y + 17$

25. $9g + 15 \geq (5g - 9)3$

