

Solve. Circle your answers.

1. $x + 5 = -12$

2. $-9x = 36$

3.
$$\frac{3x}{5} = 12$$

4. $5.2x - 2.5 = 13.1$

5. $9 - 4x = 37$

6. $8x + 3 = 2x - 9$

7. $40 = 5(3x + 2)$

8. $7x - 2(2x + 3) = x + 8$

9.
$$\frac{1}{5} + x = \frac{3}{10}$$

10. $4X + 3X = 42$

11. Nature experts claim that the number of times C that a cricket chirps per minute is related to the Fahrenheit temperature T according to the model
- $$C = 4T - 160$$
- Use this model to determine the temperature at which the crickets will chirp 140 times per minute. Solve for T first.

Solve each formula for the given letter.

12. $E = mc^2$ for m

13. $D = ah - 64$ for h

14. $M = \frac{a+b}{2}$ for b

15. Graph $x > 8$ on a number line and write interval notation.

16. Graph $y \leq 0$ on a number line and write interval notation.

17. Translate to an equation do not solve. 15 subtracted from twice x is equal to the difference of 23 and x .

18. The sum of the angles of a triangle is _____.

The second angle of a triangle is five times as large as the first. The third angle of the triangle is 40° less than the second angle. Find the measure of the second angle.

FIRST ANGLE = X

SECOND ANGLE = _____ = _____

THIRD ANGLE = _____

19. Translate to an equation. Do not solve. Five times the sum of 3 and some number is 70.

20. The perimeter of a rectangle is 90 cm. The length is 11 more than the width. Find the length.

21. The sum of three consecutive even integers is the same as 10 more than twice the smallest. Find the integers.
22. Translate to an equation. Do not solve. Twenty more than the quotient of a number and 3 is the same as two less than the number.

Solve. Write the answer in set builder notation.

23. $-5x + 6 \geq 26$

24. $3(2x - 3) < 27$

25. $4x \leq -12$

26. $2x - 1 > 4x + 9$

27. $2m \leq -15 + 5m$

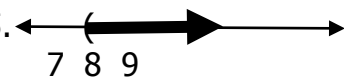

28. SOLVE: $7m - (12m + 4) = 2m - 17 + m$

29. Solve: $\frac{3}{4}(x - 8) = 5$

ANSWERS:

1. -17 2. -4 3. 20 4. 3 5. -7 6. -2 7. 2 8. 7

9. $\frac{1}{10}$ 10. 6 11. 75 12. $\frac{E}{c^2}$ 13. $\frac{D+64}{a}$ 14. $2M - a$

15.  $(8, \infty)$ 16.  $(-\infty, 0]$

17. $2x - 15 = 23 - x$ 18. $x + 5x + 5x - 40 = 180$; 100 degrees 19. $5(3 + x) = 70$

20. $2(x+11) + 2x = 90$; 28 cm 21. $x+x+2+x+4=2x+ 10$; 4, 6, 8

22. $\frac{n}{3} + 20 = n - 2$ 23. $\{x|x \leq -4\}$ 24. $\{x|x < 6\}$ 25. $\{x|x \leq -3\}$

26. $\{x|x < -5\}$ 27. $\{m|m \geq 5\}$ 28. $\frac{13}{8}$ 29. $\frac{44}{3}$