

ACP Algebra II Summer Review Packet**Short Answer**

Find the value of the given expression.

1. $\frac{1}{2} [32 + (70(-21))]$

2. $14 - 90 \div 5$

3. Evaluate the given expression if $w = 33$, $x = 14$, $y = 28$, and $z = 36$.

$$w + \frac{1}{x} + \frac{1}{y} + \frac{1}{z}$$

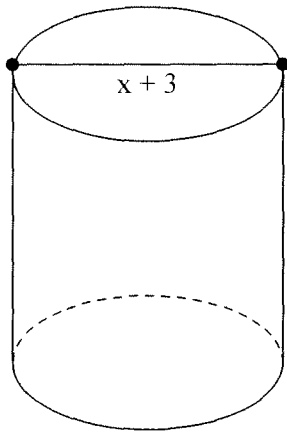
4. Evaluate the given expression if $x = 25$, $y = 10$, $w = 14$, and $z = 4$.

$$(x - y)^2 + 10wz$$

5. Find the value of $x - y^n$ if $x = 1000$, $y = 10$, and $n = 4$.

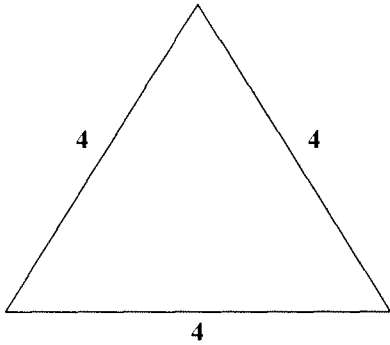
6. The flow rate of IV fluids is calculated using the formula $F = \frac{V \times d}{t}$, where V is the volume of the solution in milliliters, d is the drop factor in drops per minute, and t is the time in minutes. Determine the flow rate of 1500 milliliter IV fluid for a patient for 24 hours if the drop factor is 1 milliliter per minute.

7. The formula to calculate the volume of a cylinder is $V = \pi r^2 h$. Write an expression to represent the volume of the cylinder.



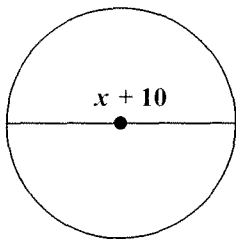
8. The formulas to find the area of an equilateral triangle are

$$A = \frac{1}{2} \times \text{base} \times \text{altitude}, \text{ and } A = \frac{\sqrt{3}}{4} (\text{side})^2.$$



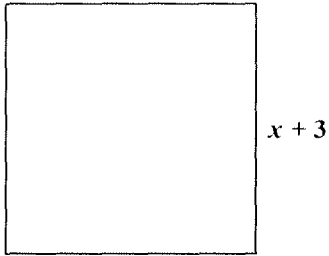
Using these formulas, find the altitude of the given triangle.

9. The formula for the circumference C of a circle with diameter d is $C = \pi d$. Write an expression to represent the circumference of the following circle.



10. Find the value of $a^n b^n$ if $n = 3$, $a = 100$, and $b = \frac{1}{4}$.

11. The formula for the area A of a square with side s is $A = s^2$. Write an expression to represent the area of the square.



12. Name the sets of numbers to which the given number belongs.

$$\sqrt{144}$$

13. Name the sets of numbers to which the given number belongs.

$$\frac{60}{47}$$

Simplify the given expression.

14. $6x + 21y - 26x + 64y$

Write an algebraic expression to represent the following verbal expression.

15. eight more than the product of a number and 100

16. the cube of the difference of a number and 43

Name: _____

ID: A

17. 20 times the difference of 9 and a number

18. the sum of 200 and 7 times a number

19. ten less than the cube of a number

20. the cube of the quotient of a number and 24

21. the cube of the difference of 40 and a number

Write a verbal expression to represent the given equation.

22. $x - 25 = 3$

23. $w^2 = 32w$

24. $4p + 3 = -5$

25. $\frac{x}{48} = 4(x + 2)$

Solve the given equation. Check your solution.

26. $46p - 27 = 6$

Name: _____

ID: A

27. $86p - 29p + 171p - p = 154$

28. $\frac{73}{2}m - 82 = \frac{99}{2}$

29. $29m + \frac{66}{7} = \frac{12}{7}$

30. $45 = -11(y + 10)$

31. $24(43x + 3) - 42(88x + 7) = 132$

Solve the given inequality. Describe the solution set using the set-builder or interval notation. Then, graph the solution set on a number line.

32. $m + 4 \geq 6$

33. $3.3 - 2p \leq 0$

34. $\frac{10 - p}{2} \leq 1$

Find the midpoint of the line segment with endpoints at the given coordinates.

35. $(11, -13)$ and $(-4, -11)$

36. $(-2, 8)$ and $(-4, -9)$

Find the distance between the pair of points with the given coordinates.

37. $(-11, 10)$ and $(1, -8)$

38. $(-8, 17)$ and $(-8, -8)$

39. State whether the given equation or function is linear. Write *yes* or *no*. Explain your reasoning.

$$7x + \frac{9}{11}y = 7$$

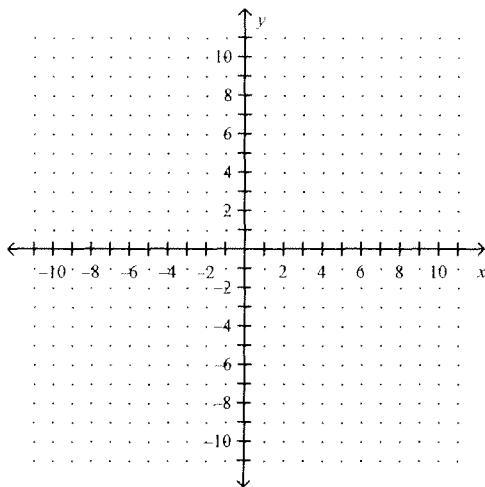
40. State whether the given equation or function is linear. Write *yes* or *no*. Explain your reasoning.

$$f(x) = 3x + 2$$

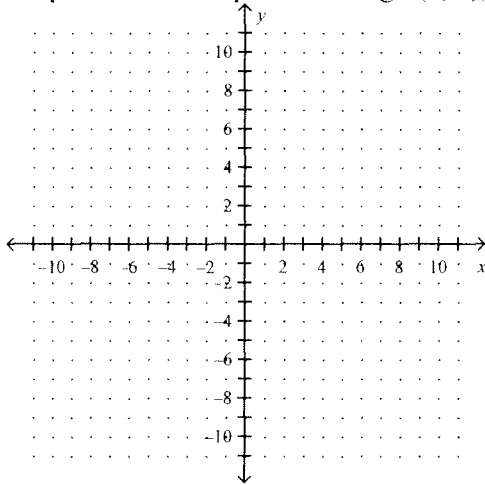
41. Write the equation $5y = 18x + 0.2$ in standard form. Identify A , B , and C .

42. Find the x -intercept and the y -intercept of the graph of the equation $11x + 12y = 8$. Then graph the equation.

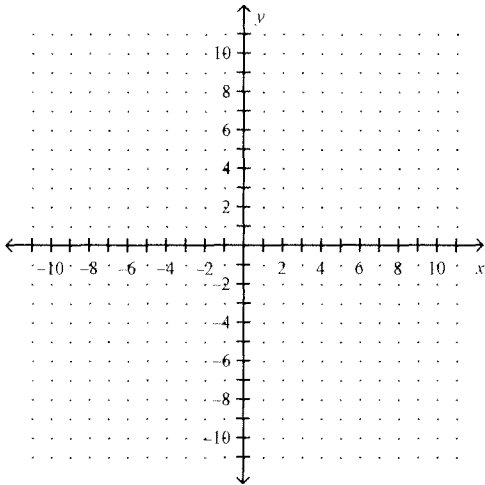
43. Find the x -intercept and the y -intercept of the graph of the equation $\frac{4}{3}x + 6y = 16$. Then graph the equation.
44. Find the slope of the line that passes through the pair of points $(17, 11)$ and $(21, 19)$.
45. Find the slope of the line that passes through the pair of points $(-1, -3)$ and $(-8, 10)$.
46. Find the slope of the line that passes through the pair of points $(5, 12)$ and $(-5.5, -7.5)$.
47. Find the slope of the line that passes through the pair of points $(\frac{10}{17}, \frac{2}{17})$ and $(\frac{9}{17}, \frac{13}{18})$.
48. Find the slope of the line that passes through the pair of points $(\frac{7}{20}, \frac{8}{3})$ and $(\frac{3}{8}, \frac{7}{9})$.
49. Graph the line that passes through $(1, 4)$, parallel to a line whose slope is -0.4 .



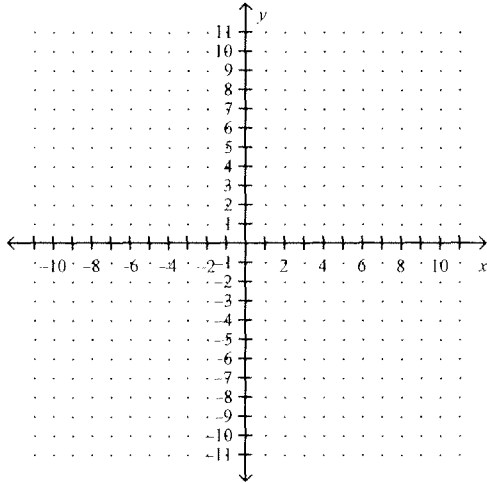
50. Graph the line that passes through $(2, 5)$, parallel to the graph of $1.4x + 8.5y = -3$.



51. Graph the line that passes through $(-1, 5)$, perpendicular to a line whose slope is $-\frac{1}{6}$.



52. Graph the line that is perpendicular to the graph of $8x + 4y = 3$ and intersects that graph at its x -intercept.



53. Write an equation in slope-intercept form for the line that satisfies the following condition.
slope 5, and passes through (2, 28)
54. Write an equation in slope-intercept form for the line that satisfies the following condition.
slope $\frac{1}{2}$ and passes through (4, -17)
55. Write an equation in slope-intercept form for the line that satisfies the following condition.
passes through (5, -14) and (14, 2)
56. Write an equation in slope-intercept form for the line that satisfies the following condition.
passes through (3, 7) and (19, 24)
57. Write an equation in slope-intercept form for the line that satisfies the following condition.
 x -intercept 6, and y -intercept 20
58. Write an equation in slope-intercept form for the line that satisfies the following condition.
 x -intercept $\frac{10}{11}$ and y -intercept $\frac{19}{30}$

Name: _____

ID: A

59. Write an equation in slope-intercept form for the line that satisfies the following condition.
passes through (8, 10), parallel to the graph of $y = \frac{8}{3}x + 7$

60. Write an equation in slope-intercept form for the line that satisfies the following condition.
passes through (10, 19), parallel to the line that passes through (20, 10) and (23, 21)

61. Write an equation in slope-intercept form for the line that satisfies the following condition.
passes through (29, 8), perpendicular to the graph of $y = \frac{1}{13}x + 17$