

Geometry Summer assignment

Evaluate the expression. (p. 8)

1. $3 \cdot 4^2 - 21$

2. $4 + 4^2 \div 8$

3. $77 \div (11 - 4)$

4. $\frac{1}{2}(8 \cdot 6) - 4^2$

5. $3[50 - (13 - 7)^2]$

6. $\frac{3}{4}[(6 + 4)^2 - 40]$

Check whether the given number is a solution of the equation or inequality. (p. 21)

7. $7t - 11 = 52; 9$

8. $3b - 2 = 2b + 3; 4$

9. $8z - 11 > 21; 4$

10. $5a + 3 \leq 13; 2$

11. $5 - y \geq 5; 3$

12. $8x - 15 < 8; 7$

Find the sum or difference.

13. $-2\frac{1}{6} + (-4\frac{2}{3})$ (p. 74)

14. $2.5 - (-2.05)$ (p. 80)

15. $-24.6 - (-5.5)$ (p. 80)

Find the product or quotient.

16. $\frac{5}{2}(-8)(-5)$ (p. 88)

17. $9 \div (-\frac{3}{7})$ (p. 103)

18. $-\frac{7}{8} \div \frac{1}{2}$ (p. 103)

Evaluate the expression for the given value of the variable(s).

19. $\frac{32}{w} - 2$ when $w = 4$ (p. 8)

20. $7 + 3m^2 - 8m$ when $m = 5$ (p. 8)

21. $\frac{5y}{32 - y^3}$ when $y = 3$ (p. 8)

22. $5.15 + (-h) + 6.6$ when $h = 4.3$ (p. 74)

23. $17.4 - |-p|$ when $p = 3.5$ (p. 80)

24. $k^2 - 12.2k$ when $k = -1.6$ (p. 88)

25. $8.3x - (-y)$ when $x = 6$ and $y = 9$ (p. 88)

26. $\frac{y}{5x - y}$ when $x = 2$ and $y = 4$ (p. 103)

Solve the equation. Check your solution.

27. $m + 16 = 5$ (p. 134)

28. $-4 = \frac{w}{7}$ (p. 134)

29. $5 + 3x = 23$ (p. 141)

30. $\frac{a}{3} - 4 = 29$ (p. 141)

31. $-4 = -2b - 18 + 5b$ (p. 148)

32. $\frac{3}{8}(16n + 48) = 72$ (p. 148)

33. $-8z + 18 = 2(2z - 9)$ (p. 154)

34. $(15c + 30) = \frac{1}{3}(102 - 12c)$ (p. 154)

Solve the proportion. (p. 168)

35. $\frac{6}{d} = \frac{12}{17}$

36. $\frac{4}{7} = \frac{20}{m}$

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

38. $\frac{3}{6h} = \frac{12}{72}$

39. $\frac{2}{11} = \frac{4}{t-1}$

40. $\frac{12}{a+1} = \frac{132}{35}$

41. $\frac{w+2}{8} = \frac{w}{3}$

42. $\frac{4}{9} = \frac{z}{z+10}$

Evaluate the expression.

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| 1. $2^5 \cdot 2 - 4 \div 2$ (p. 8) | 2. $24 \div 6 + (9 - 6)$ (p. 8) | 3. $5[(6 - 2)^2 - 5]$ (p. 8) |
| 4. $\sqrt{144}$ (p. 110) | 5. $-\sqrt{2500}$ (p. 110) | 6. $\pm\sqrt{400}$ (p. 110) |

Check whether the given number is a solution of the equation or inequality. (p. 21)

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| 7. $7 + 3x = 16; 3$ | 8. $21y + 1 = 1; 0$ | 9. $20 - 12h = 12; 1$ |
| 10. $g - 3 > 2; 5$ | 11. $10 \geq 4 - x; 0$ | 12. $30 - 4p \geq 5; 6$ |

Simplify the expression.

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| 13. $5(y - 1) + 4$ (p. 96) | 14. $12w + (w - 2)3$ (p. 96) | 15. $(g - 1)(-4) + 3g$ (p. 96) |
| 16. $\frac{10h - 25}{5}$ (p. 103) | 17. $\frac{21 - 4x}{-7}$ (p. 103) | 18. $\frac{32 - 20m}{2}$ (p. 103) |

Solve the equation.

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| 19. $x - 8 = 21$ (p. 134) | 20. $-1 = x + 3$ (p. 134) | 21. $6x = -42$ (p. 134) |
| 22. $\frac{x}{3} = 8$ (p. 134) | 23. $5 - 2x = 11$ (p. 141) | 24. $\frac{2}{3}x - 3 = 17$ (p. 141) |
| 25. $3(x - 2) = -15$ (p. 148) | 26. $3(5x - 7) = 5x - 1$ (p. 154) | 27. $-7(2x - 10) = 4x - 10$
(p. 154) |

Graph the equation.

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| 28. $x + 2y = -8$ (p. 225) | 29. $-2x + 5y = -10$ (p. 225) | 30. $3x - 4y = 12$ (p. 225) |
| 31. $y = 3x - 7$ (p. 244) | 32. $y = x + 6$ (p. 244) | 33. $y = -\frac{1}{3}x$ (p. 253) |

Write an equation of the line in slope-intercept form with the given slope and y-intercept. (p. 283)

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| 34. slope: 5
y-intercept: -1 | 35. slope: -1
y-intercept: 3 | 36. slope: -7
y-intercept: 0 |
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Write an equation in point-slope form of the line that passes through the given points. (p. 302)

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| 37. (1, -10), (-5, 2) | 38. (4, 7), (-4, 3) | 39. (-9, -2), (-6, 8) |
| 40. (-1, 1), (1, -3) | 41. (2, 4), (8, 2) | 42. (-6, 1), (3, -5) |

Solve the inequality. Then graph your solution.

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| 43. $x - 9 < -13$ (p. 356) | 44. $8 \leq x + 7$ (p. 356) | 45. $8x \geq 56$ (p. 363) |
| 46. $\frac{x}{-4} > 7$ (p. 363) | 47. $1 - 2x < 11$ (p. 369) | 48. $8 > -3x - 1$ (p. 369) |
| 49. $4x - 10 \leq 7x + 8$ (p. 369) | 50. $7x - 5 < 6x - 4$ (p. 369) | 51. $-4 < 3x - 1 < 5$ (p. 380) |
| 52. $3 \leq 9 - 2x \leq 15$ (p. 380) | 53. $ 3x < 15$ (p. 398) | 54. $ 4x - 2 \geq 18$ (p. 398) |

CUMULATIVE REVIEW

Chapters 1–10

Evaluate the expression for the given value of x . (p. 64)

1. $-|x| + 9$ when $x = -6$ 2. $|-x| + 2.6$ when $x = 2$ 3. $0.7 - |x|$ when $x = -0.5$

Solve the equation.

4. $5 - 2a = 13$ (p. 141) 5. $13y + 16 - y = 4$ (p. 148) 6. $-(w + 1) = w + 3$ (p. 154)

Graph the equation. (pp. 215, 225, 244, 253)

7. $x = -6$ 8. $y = -3x$ 9. $y = 6.5x$ 10. $y = \frac{4}{3}x - 8$
11. $y = -3x + 9$ 12. $y + x = 8$ 13. $2y - x = 2$ 14. $2x + 5y = -40$

Write an equation of the line that passes through the given point and is perpendicular to the given line. (p. 319)

15. $(0, 3)$, $y = -5x + 2$ 16. $(2, 2)$, $y = -x - 7$ 17. $(8, 3)$, $y = \frac{1}{2}x + 2$

Solve the inequality. Then graph the solution.

18. $m - 8 < -15$ (p. 356) 19. $\frac{x}{-3} > 12$ (p. 363) 20. $1 - 4n < -11$ (p. 369)
21. $5b - 7 \leq 7b - 5$ (p. 369) 22. $12 < z + 9 \leq 16$ (p. 380) 23. $4 \leq 2c + 7 \leq 21$ (p. 380)

Solve the linear system. (pp. 427, 435, 444, 451, 459)

24. $y = 5x - 4$
 $-4x + y = -2$ 25. $x - 4y = -44$
 $-3x + 12y = 132$ 26. $-4x + 7y = -33$
 $-3x + 2y = -15$

Simplify the expression.

27. $(-9r)^3$ (p. 489) 28. $(2p^4)^3 \cdot p^7$ (p. 489) 29. $\frac{(3x)^4 y}{xy^3}$ (p. 495)

Graph the function.

30. $y = (2.5)^x$ (p. 520) 31. $y = (0.8)^x$ (p. 531) 32. $y = \frac{1}{2} \cdot \left(\frac{1}{4}\right)^x$ (p. 531)

Find the sum or difference. (p. 554)

33. $(x^2 - 3x + 8) + (-2x^2 + 15x + 4)$ 34. $(5m^2 - 6) - (8m^3 + m^2 - 2m + 11)$

Find the product.

35. $(z + 9)(2z - 7)$ (p. 562) 36. $(5b - 2)(8b - 7)$ (p. 562)
37. $(q + 2)(-3q^2 + 6q - 1)$ (p. 562) 38. $(7 + y)^2$ (p. 569)
39. $(2k - 11)^2$ (p. 569) 40. $(12w - 5)(12w + 5)$ (p. 569)

Factor the expression.

41. $x^2 + 6x - 72$ (p. 583) 42. $2m^2 - 5mn - 3n^2$ (p. 593)
43. $25d^2 + 60d + 36$ (p. 600) 44. $-2a^2 + 50b^2$ (p. 600)
45. $z^2(z - 6) + 4(6 - z)$ (p. 606) 46. $y^3 + 8y^2 - 9y - 72$ (p. 606)