

Placement Tests

When taking the placement tests, please show all your work. Just answers will not be accepted. You may use your calculator on math and science placement tests. Some of the tests are long so you may take them over multiple days. Parents are asked to proctor the test and no kibitzing. You may be unhappy with the placement of your child in a class. If you feel that an error has been made, wish a re-test, or plan for summer tutoring please contact the teacher to discuss options. Mail/email the test to the appropriate teacher. If you need to mail it to 2 teachers, make a copy and send to both ☺ Meanwhile you can go ahead and register your student for the class and we will make an adjustment if there is an issue with the test.

PLEASE do NOT send registrations to the teacher only the tests. Contact me if you have any questions: Desiree Voegele clccoop03@yahoo.com

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Algebra Readiness Test

For use after Chapter 13

Evaluate the expression when $x = 6$, $y = 10$, and $z = -12$.

- | | | |
|--------------------|---------------------|---------------------------|
| 1. $13 - x$ | 2. $2x + y$ | 3. $\frac{x}{y}$ |
| 4. yz | 5. $\frac{1}{2}z^2$ | 6. $-2(y - z)$ |
| 7. $x^2 + 2y - 13$ | 8. $(z + x)^2 - y$ | 9. $\frac{(y - x)^2}{2z}$ |

Identify the property that the statement illustrates.

10. $a + (b + c) = (a + b) + c$
 11. $m \cdot n = n \cdot m$
 12. $x(y + z) = xy + xz$
 13. $x \cdot 1 = x$

Use the distributive property to write an equivalent variable expression.

14. $9(x + 3)$ 15. $-3(2d - 4)$ 16. $(9 + 7x)(-5)$

Simplify the expression.

17. $4(3m)$ 18. $-3b(13)$ 19. $x + 9x$
 20. $-5t + 7t - 2t$ 21. $3p - (p + 6)$ 22. $5d + (3 - d)$
 23. $4(c + 2) + c$ 24. $-2(y + 3) - 7y$ 25. $-k + 5(k - 6)$

Solve the equation.

- | | |
|--------------------------------|---------------------------------|
| 26. $x + 14 = -7$ | 27. $5 = h - 23$ |
| 28. $-13z = 169$ | 29. $\frac{r}{4} = -14$ |
| 30. $-1.2 + y = 3.7$ | 31. $j - 9.2 = -3.6$ |
| 32. $3.6 = 2.4v$ | 33. $0.8 = \frac{a}{6.5}$ |
| 34. $\frac{c}{5} + 4 = -2$ | 35. $51 = -3 - \frac{b}{2}$ |
| 36. $6(x + 3) - 1 = -7$ | 37. $4h - 3(h + 2) = -8$ |
| 38. $k + (2 - 5k)(6) = k + 12$ | 39. $-3t + 7(t - 1) = -11 + 2t$ |

Answers

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Continued

Algebra Readiness Test

For use after Chapter 13

Write the verbal sentence as an equation.

40. Six plus 4 times a number is equal to 16 minus the number.
 41. Five times a number minus -11 is equal to 26 times the number.
 42. A number divided by 3 and increased by 5 is equal to -9 .
 43. A number less 13 is equal to the number divided by 2.

Solve the inequality.

44. $x + 5 < -4$ 45. $45 \geq c - 5$
 46. $-6y \geq 72$ 47. $-3 < \frac{b}{18}$
 48. $8 - 3w \leq 14$ 49. $17 > \frac{p}{4} - 20$
 50. $-t - 7 \geq 3(t + 1)$ 51. $-6x + 17 > 5 - 2x$

Write the verbal sentence as an inequality.

52. The difference of 5 and y is at least 19.
 53. The sum of z and -12 is greater than -20 .
 54. The quotient of x and 4 is at most -2 .
 55. The product of b and 7 is less than 84.

Find the greatest common factor of the monomials.

56. $3x^2, 13x$ 57. $64a^5b^5, 80a^4b^7$ 58. $15p, 35p^2$

Write the fraction in simplest form.

59. $\frac{35k^2}{28k}$ 60. $\frac{64a^5}{8a^3}$ 61. $\frac{51xy^3}{34x^4}$ 62. $\frac{24mp}{40m^2p^3}$

Find the least common multiple of the monomials.

63. $4t, 20t^2$ 64. $10xy^2, 12x^2y$ 65. $15a^4b^2, 24ab^3$

Find the product or quotient. Write your answer using only positive exponents.

66. $t^4 \cdot t^0$ 67. $y^2 \cdot y^{-5}$ 68. $2a^3 \cdot 4a^2$ 69. $b^{-4} \cdot b^{-1}$
 70. $\frac{m^3}{m^5}$ 71. $\frac{x^{-2}}{x^{-4}}$ 72. $\frac{54d^6}{3d^5}$ 73. $\frac{9p^5}{3p^{-2}}$

Answers

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Algebra Readiness Test

Continued

For use after Chapter 13

Simplify the expression.

74. $\frac{x}{9} + \frac{x}{15}$

75. $\frac{d}{8} - \frac{d}{20}$

76. $-\frac{6h}{13} + \frac{2h}{39}$

Solve the equation.

77. $\frac{6}{13}x = 24$

78. $\frac{2}{5}c - 5 = 17$

79. $\frac{7}{8} = \frac{1}{2}d + \frac{1}{8}$

Solve the equation or inequality by first clearing the fractions or the decimals.

80. $\frac{3}{4}a + \frac{1}{5} = \frac{7}{20}$

81. $\frac{5}{16} = \frac{1}{3}t - \frac{3}{8}$

82. $1.2x + 2.4 = 4.2$

83. $1.9x + 6.7 = 18.48$

84. $-\frac{1}{7}d + \frac{1}{2} \geq \frac{5}{14}$

85. $\frac{2}{3}b - \frac{8}{27} < \frac{50}{81}$

Solve the proportion.

86. $\frac{f}{12} = \frac{3}{36}$

87. $\frac{x}{48} = \frac{5}{6}$

88. $\frac{7}{a} = \frac{56}{96}$

89. $\frac{6}{7} = \frac{102}{d}$

90. $\frac{9.6}{c} = \frac{4.8}{51}$

91. $\frac{4.7}{y} = \frac{14.1}{33}$

Use a proportion or the percent equation to answer the question.

92. What percent of 580 is 203?

93. 99 is 22.5% of what number?

94. What number is 25% of 125?

Tell whether the ordered pair is a solution of the equation.

95. $y = 4x - 6; (-1, -10)$

96. $y = -6x + 13; (2, -1)$

97. $2x - 3y = -3; (-3, 1)$

98. $-3x + 5y = 2; (6, 4)$

Write the equation in function form.

99. $-4x + 6y = 24$

100. $-x - 6y = 8$

101. $2x + 5y = -15$

102. $3x - y = -7$

Answers

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Continued

Algebra Readiness Test

For use after Chapter 13

Let $f(x) = 7x - 4$ and $g(x) = -x + 2$. Find the indicated value.

103. $f(3)$

104. $g(-5)$

105. $f(-3) + g(1)$

106. x when $g(x) = -9$

Tell whether the ordered pair is a solution of the inequality.

107. $x > -4$; $(-5, 6)$

108. $y \leq -x - 2$; $(1, -1)$

109. $y < 2x + 5$; $(5, 10)$

110. $y \geq -6x - 7$; $(-3, 11)$

Solve the equation.

111. $a^2 = 81$

112. $5y^2 = 125$

113. $8d^2 = 968$

Simplify the expression.

114. $\sqrt{49b^2}$

115. $\sqrt{\frac{24x^2}{25}}$

116. $\sqrt{44k}$

Write the expression as a polynomial in standard form.

117. $5x - 3 + 2x + 8$

118. $-4z^2 + 7 + 6z^2 + z$

119. $y^2 - 3(6 - 2y^2) + 4y$

120. $6(a^2 + a) - 2a^2 + 3a$

Find the sum, difference, product, or quotient.

121. $(x^2 + 3x - 4) + (2x^2 - 5x + 2)$

122. $(h^3 - 4h^2 + 2) + (7h^2 - h - 5)$

123. $(6y^3 + 2y^2 - 3y) - (2y^3 + 4y - 7)$

124. $(4k^4 - 3k^2) - (6k^3 + k^2 + 9)$

125. $(6g - 7)(2g)$

126. $-t^2(t^3 - 7t + 3)$

127. $3b^3(7 - 2b^2 + b^3)$

128. $(p^4 + 2p^2 + 1)(-4p^2)$

129. $\frac{4z^3 - 8z^2 + 16z}{2z}$

130. $\frac{36a^4 - 108a^3 + 72a^2 - 12a}{-6a}$

131. $(c - 6)(3c + 5)$

132. $(7t - 2)(5 - 6t)$

133. $(8x + 3)(-2x - 1)$

134. $(4a - 3)^2$

Simplify the expression. Write your answer using positive exponents.

135. $(-4a)^3$

136. $\left(\frac{6}{y}\right)^4$

137. $(x^{-2})^{-3}$

138. $(h^7)^{-5}$

Answers

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