

Florida College Basic Skills Exit Test
Practice Exam

1. Simplify: $8 - 4 \div 2 - 10 \div 2$
A. 4 B. 1 C. -3 D. -4
2. Simplify: $18 + 3 \times 2 \div 6$
A. 19 B. 18 C. 7 D. 4
3. Simplify: $12 - (-3)^2 \div (7 - 4)$
A. 1 B. 7 C. 9 D. 15
4. Simplify: $(6 - 2)^2 \div 4$
A. 8 B. 4 C. 2 D. 1
5. Evaluate: $|15| + |-3| - |17|$
A. -5 B. 1 C. 29 D. 35
6. Evaluate: $|-8| - |-5|$
A. -13 B. -3 C. 3 D. 13
7. Simplify: $-2x + 3(x + 2) + 1$
A. $5x + 7$ B. $5x + 3$ C. $x + 7$ D. $x + 3$
8. Simplify: $-2[x + 9(x + 1)]$
A. $20x + 18$ B. $20x + 2$ C. $-20x - 2$ D. $-20x - 18$

9. Evaluate the given expression when $w = -2$. $3w^2 + 5w - 8$
- A. 14 B. -6 C. -11 D. -30
10. Evaluate the given expression when $a = -3, b = 2$, and $c = -1$. $2ab - c$
- A. 13 B. 11 C. -11 D. -13
11. Solve for x : $2(3x + 5) = 5x - 11$
- A. $x = -21$ B. $x = -16$ C. $x = -\frac{21}{11}$ D. $x = -1$
12. Solve for x : $\frac{1}{2}x + 6 = 3 + 2x$
- A. $x = 3$ B. $x = 2$ C. $x = 0$ D. $x = -3$
13. Solve for x : $\frac{7}{10}x - 1 = 2$
- A. $x = \frac{30}{7}$ B. $x = \frac{10}{7}$ C. $x = \frac{7}{10}$ D. $x = \frac{3}{7}$
14. Solve for x : $5w + 4x = 7k$
- A. $x = \frac{7k + 5w}{4}$ B. $x = 3kw$ C. $x = \frac{7k - 5w}{4}$ D. $x = 7k - 5w$
15. Solve for y : $3x + 4y = 12$
- A. $y = 12 - 3x$ B. $y = \frac{3x - 12}{4}$ C. $y = 3 - 3x$ D. $y = \frac{12 - 3x}{4}$
16. Solve for w : $p = 2\ell + 2w$
- A. $w = \frac{p - 2\ell}{2}$ B. $w = P - 2\ell$ C. $w = P - \ell$ D. $w = \frac{P - \ell}{2}$

17. Solve: $2(4x+1) < 18$
- A. $x < 2$ B. $x < \frac{17}{8}$ C. $x > 2$ D. $x > \frac{17}{8}$
18. Solve: $2x+1 < 3x+4$
- A. $x < 3$ B. $x > 3$ C. $x < -3$ D. $x > -3$
19. If 4 times a number is increased by 7, the result is 15 less than the square of the number. Choose the equation that could be used to find the number x .
- A. $4x+7 = 15 - x^2$ B. $4(x+7) = x^2 - 15$ C. $4x+7 = x^2 - 15$ D. $11x = x^2 - 15$
20. The sum of a number and 6 is 8 more than twice a number. Find the equation that could be used to find the number, x .
- A. $x+6 = 2x+8$ B. $x+6 = x^2+8$ C. $x+6 = 2(x+8)$ D. $6x = 2x+8$
21. If a television costs \$180 after a 20% discount, what is the original cost?
- A. \$150 B. \$200 C. \$216 D. \$225
22. The length of a rectangle is 2 feet more than the width. The perimeter of the rectangle is 20 feet. Find the length.
- A. 4 feet B. 6 feet C. 9 feet D. 11 feet
23. Identify the proportion listed below that solves this problem.
- A car can travel 189 miles on 9 gallons of gasoline. How far can it travel on 13 gallons?
- A. $\frac{9}{189} = \frac{x}{13}$ B. $\frac{189}{9} = \frac{x}{13}$ C. $\frac{189}{12} = \frac{x}{9}$ D. $\frac{189}{x} = \frac{13}{9}$
24. Identify the proportion listed below that solves this problem.
- If you burn 722 calories in 3 hours while riding a bicycle, how many calories would you burn in 7 hours?
- A. $\frac{3}{722} = \frac{x}{7}$ B. $\frac{722}{3} = \frac{x}{7}$ C. $\frac{722}{3} = \frac{7}{x}$ D. $\frac{722}{3} = \frac{7}{3}$

25. Simplify: $(a^2b^3)^2$

A. a^4b^9 B. a^2b^9 C. a^4b^6 D. a^4b^5

26. Simplify: $\frac{5x^2y}{x^3}$

A. $5x^5y$ B. $\frac{5y}{x}$ C. $5xy$ D. $\frac{5x}{y}$

27. Simplify: $(x^2y^{-1})^{-3}$

A. $\frac{y^3}{x^5}$ B. $\frac{y^3}{x^6}$ C. $\frac{1}{xy^4}$ D. $\frac{y^4}{x^5}$

28. Simplify: $\frac{x^{-3}y^6}{x^{-4}y^4}$

A. xy^2 B. $\frac{y^2}{x}$ C. $\frac{y^2}{x^7}$ D. x^7y^2

29. Simplify: $x^{-2}x^{-6}$

A. x^{12} B. $\frac{1}{x^8}$ C. $\frac{1}{x^4}$ D. $\frac{1}{x^{12}}$

30. Simplify: $(a^2b^0c^{-1})^3$

A. $a^5b^3c^2$ B. $\frac{a^6b^3}{c^3}$ C. $\frac{a^5}{c^3}$ D. $\frac{a^6}{c^3}$

31. Simplify $\frac{a^{-2}b^{-1}c^2}{a^3b^0c}$

A. $\frac{c}{a^5b}$ B. $\frac{c}{a^5}$ C. $\frac{a^5c}{b}$ D. $\frac{bc}{a^5}$

32. Convert to standard form. 2.61×10^3
A. 0.00261 B. 26.1 C. 2,610 D. 26,100
33. Convert to standard form. 7.96×10^{-2}
A. 0.00796 B. 0.0796 C. 796 D. 7,960
34. Convert to scientific notation. 650,000
A. 65×10^4 B. 6.5×10^5 C. 6.5×10^{-5} D. $.65 \times 10^6$
35. Simplify: $(3x^2 - 4x + 8) + (2x^2 + 5x - 12)$
A. $5x^2 + x - 4$ B. $5x^4 - x^2 - 4$ C. $6x^4 - x^2 + 4$ D. $6x^2 - 20x + 96$
36. Simplify: $(3x^2 + 2x - 6) - (x^2 - x + 2)$
A. $2x^4 + 3x - 8$ B. $2x^2 + x - 4$ C. $2x^2 + 3x - 4$ D. $2x^2 + 3x - 8$
37. Simplify: $(x^2 + 2x - 5) - (4x^2 - 3x - 1)$
A. $-3x^4 + 5x^2 - 4$ B. $-3x^2 + 5x - 4$ C. $-3x^2 + 5x - 6$ D. $-3x^2 - x - 6$
38. Simplify: $3x(2x + 5)$
A. $6x^2 + 5$ B. $5x^2 + 15x$ C. $6x^2 + 15$ D. $6x^2 + 15x$
39. Simplify: $4x^3(2x^2 - 7)$
A. $8x^5 - 28x^3$ B. $8x^6 - 7$ C. $6x^5 - 28x^3$ D. $8x^6 - 28x^3$
40. Simplify: $2xy(9x - 8y)$
A. $18x^2 - 16y^2$ B. $2x^2y^2$ C. $18x^2y - 8y$ D. $18x^2y - 16xy^2$

41. Simplify: $(2x + 5)(x + 9)$
A. $3x^2 + 23x + 14$ B. $3x^2 + 23x + 45$ C. $2x^2 + 14x + 45$ D. $2x^2 + 23x + 45$
42. Simplify: $(2x - 7)(2x + 7)$
A. $4x^2 - 49$ B. $2x^2 - 49$ C. $4x^2 + 49$ D. $4x^2 + 28x - 49$
43. Simplify: $(5x - 9)(x + 6)$
A. $5x^2 + 39x - 54$ B. $5x^2 + 21x - 3$ C. $5x^2 - 3x - 15$ D. $5x^2 + 21x - 54$
44. Simplify: $(2 - 3x)^2$
A. $4 - 9x^2$ B. $4 - 12x + 9x^2$ C. $4 + 9x^2$ D. $4 - 6x + 9x^2$
45. Factor completely: $4x^4 - 8x^3 - 4x^2 + 16x$
A. $4x(x^3 - 2x^2 - x + 4)$
B. $4x(x^4 - 2x^3 - x^2 + 4x)$
C. $4x(x^3 - 2x^2 + x - 4)$
D. $4(x^4 - 2x^3 - x^2 + 4x)$
46. Factor completely: $12a^2b^2 - 3ab$
A. $3ab(4ab)$ B. $3ab(4ab - 1)$ C. $3ab(4a^2b^2 - ab)$ D. $ab(12ab - 3)$
47. Factor completely: $4x^2 - 9$
A. $(2x^2 + 3)(2x^2 - 3)$ B. $(2x + 3)(2x - 3)$ C. $(2x = 1)(2x - 9)$ D. $(2x - 3)(2x - 3)$
48. Factor completely: $x^2 - 16y^2$
A. $(x + 8y)(x - 8y)$ B. $(x + 4y)(x - 4y)$ C. $(x - 8y)(x + 2y)$ D. $(x - 4y)(x - 4y)$

49. Factor completely: $x^2 - 4x + 2xy - 8y$
A. $(x+4)(x+2y)$ B. $(x+4)(x-2y)$ C. $(x-4)(x+2y)$ D. $(x-4)(x-2y)$
50. Factor completely: $ax - a + bx - b$
A. $(x+1)(a+b)$ B. $(x+1)(a-b)$ C. $(x-1)(a+b)$ D. $(x-1)(a-b)$
51. Identify a factor in the trinomial below: $x^2 - 9x + 20$
A. $(x+5)$ B. $(x+4)$ C. $(x-5)$ D. $(x-10)$
52. Identify a factor in the trinomial below: $5x^2 - 9x - 2$
A. $(5x+2)$ B. $(5x+1)$ C. $(x+2)$ D. $(x+1)$
53. Simplify: $\frac{x-2}{x^2-4}$
A. $\frac{1}{x-2}$ B. $\frac{1}{x+2}$ C. $x-2$ D. $x+2$
54. Simplify: $\frac{x^2-4x+3}{1-x}$
A. $-x+3$ B. $-x+1$ C. $x-3$ D. $x+3$
55. Simplify: $\frac{2x^2+x-15}{4x^2-16x+15}$
A. $\frac{x+3}{2x-3}$ B. $\frac{x+3}{2x+3}$ C. $\frac{x-3}{2x-3}$ D. $\frac{2x+1}{4(x-4)}$
56. Solve: $x^2 - 5x + 6 = 0$
A. $x = 2, x = 3$ B. $x = -2, x = -3$ C. $x = 1, x = 6$ D. $x = -1, x = 6$
57. Solve: $3a^2 + 14a + 8 = 0$

A. $a = -\frac{2}{3}, a = -4$ B. $a = \frac{2}{3}, a = 4$ C. $a = -\frac{3}{2}, a = -4$ D. $a = -\frac{4}{3}, a = -2$

58. Assuming the variable represents a non-negative number simplify completely: $\sqrt{18x^3}$

A. $3x\sqrt{2x}$ B. $6x\sqrt{3x^2}$ C. $9x\sqrt{2x}$ D. $3\sqrt{6x^3}$

59. Assuming the variable represents a non-negative number simplify completely: $\sqrt{25x^7}$

A. $5x^6\sqrt{x}$ B. $5x\sqrt{x^6}$ C. $5x^3\sqrt{x}$ D. $5x^2\sqrt{5x^3}$

60. Simplify: $\sqrt{50} + \sqrt{18}$

A. 30 B. $8\sqrt{2}$ C. $15\sqrt{2}$ D. 16

61. Simplify: $\sqrt{3}(\sqrt{3} + \sqrt{6})$

A. $6\sqrt{2}$ B. 9 C. $3 + 3\sqrt{2}$ D. 21

62. Find the x-intercept for: $2x - 3y = 6$

A. (0,3) B. (0,-2) C. (3,0) D. (3,-2)

63. Find the y-intercept for: $x + 3y = 7$

A. $\left(0, \frac{7}{3}\right)$ B. (0,7) C. $\left(7, \frac{7}{3}\right)$ D. (7,0)

64. Simplify: $12 \div 4 \times 3 - 6 + 3$

A. -3 B. 6 C. -9 D. 3

65. Simplify: $-5^2 + 6^2 + 3 \times 5$
A. 76 B. 17 C. 37 D. 26
66. Evaluate: $3 - 2|-6 + 3(-4)|$
A. 18 B. 39 C. -33 D. -9
67. Simplify: $-3(x - 2) + 4(-2x + 3)$
A. $-11x + 18$ B. $-11x + 6$ C. $5x + 18$ D. $-5x + 6$
68. Simplify: $6 - 2[3x - (4 + x)]$
A. $8x + 16$ B. $8x - 16$ C. $-4x + 14$ D. $4x - 14$
69. Evaluate the following expression with $x = -2$, $y = -3$. $-3x^2 + 4xy - 8$
A. 42 B. 8 C. -16 D. 4
70. Solve for x: $\frac{x-3}{2} + \frac{5}{3}x = 6$
A. $x = \frac{15}{13}$ B. $x = 3$ C. $x = \frac{45}{13}$ D. $x = \frac{15}{4}$
71. Solve for x: $\frac{2}{3}(x-1) - \frac{5}{2}x = \frac{1}{4}(x+4)$
A. $x = -\frac{1}{5}$ B. $x = -\frac{4}{5}$ C. $x = \frac{12}{19}$ D. $x = 4$
72. Solve for y: $3x - 2y = 10$
A. $y = \frac{3x-10}{2}$ B. $y = \frac{10-3x}{2}$ C. $y = \frac{10+3x}{2}$ D. $y = 5 - 3x$

73. Solve the following inequality $3(2x - 5) - 4(x - 1) > 5x + 4$
- A. $x > -5$ B. $x < -5$ C. $x < \frac{23}{3}$ D. $x > 2$
74. A television set costs \$480, after a 20% discount. What was the original cost of the television set?
- A. \$576 B. \$384 C. \$600 D. \$400
75. The number of students enrolled in a private college in 2000 was 3% more than the enrollment in 1995. If the enrollment in 1995 was 7000 students, how many students enrolled in 2000?
- A. 7210 B. 6790 C. 210 D. None of these
76. Find the x-intercept of $3x - 5y = -14$
- A. $\left(0, -\frac{14}{3}\right)$ B. $\left(-\frac{14}{5}, 0\right)$ C. $\left(\frac{14}{5}, 0\right)$ D. $\left(-\frac{14}{3}, 0\right)$
77. Find the y-intercept of $y = \frac{4}{3}x - 4$.
- A. $(0, -4)$ B. $(0, 0)$ C. $(3, 0)$ D. $(0, 3)$
78. Sketch the graph of $2y = 3x + 6$, using intercepts.
79. Sketch the graph of $y = 3x + 2$, using intercepts.
80. Sketch the graph of $2x + y = 4$, using intercepts.