

# **Florida College Basic Skills Exit Test**

## **Mathematics**

### **Form B** **Practice**

1. Simplify:

$$-1 - 3[42 - 3(-6)]$$

- A. -73
- B. -181
- C. 179
- D. 71

2. Simplify:

$$6 + \{3(4 - 5) + 2[6 + (-4)]\}$$

- A. 5
- B. 13
- C. 7
- D. 6

3. Simplify:

$$4|-2| \div (-8)$$

- A. -1
- B. 1
- C.  $-\frac{1}{4}$
- D.  $\frac{1}{4}$

4. Simplify:

$$-\frac{1}{3} - \frac{3}{2} \div \frac{1}{6}$$

- A.  $-\frac{28}{3}$
- B.  $-\frac{11}{36}$
- C.  $\frac{1}{12}$
- D.  $-\frac{13}{36}$

5. Simplify:

$$7(x - 4) - 3(x + 2)$$

- A.  $10x - 34$
- B.  $4x - 32$
- C.  $4x + 22$
- D.  $4x - 34$

6. Evaluate the given expression when  $a = -3$ ,  $b = -1$  and  $c = 5$

$$b^2 - 4ac$$

- A. 59
- B. -59
- C. 61
- D. -61

7. Solve for x:

$$\frac{1}{2}x + \frac{5}{2} = \frac{3}{2} - x$$

- A. 2
- B.  $-\frac{8}{3}$
- C.  $-\frac{1}{4}$
- D.  $-\frac{2}{3}$

8. Solve for x:

$$1 - 3(x + 4) + 8x = 1 - 42 + 5(x + 7)$$

- A. No solution (contradiction)
- B. All real numbers (identify)
- C.  $\frac{49}{6}$
- D.  $-\frac{49}{6}$

9. Solve for h:

$$A = \frac{1}{2}Bh$$

- A.  $\frac{2A}{B}$
- B.  $2AB$
- C.  $\frac{2B}{A}$
- D.  $\frac{AB}{2}$

10. Solve:

$$-5x + 3 > -12$$

- A.  $x > 3$
- B.  $x < 3$
- C.  $x < -3$
- D.  $x > -3$

11. Forty less than the product of three and N is equal to seven times N. Choose the equation that could be used to find the number, N.

- A.  $3N - 40 = 7N$
- B.  $40 - 3N = 7N$
- C.  $3(N - 40) = 7N$
- D.  $3(40 - N) = 7N$

12. The length of a rectangle is 2 meters less than three times its width. The perimeter of the rectangle is 44 meters. What is the length?

- A. 6 m
- B. 12 m
- C. 16 m
- D. 20 m

13. Identify the proportion listed below that solves this problem. If 5 compact discs can be purchased for \$16, how much would 11 compact discs cost?

A.  $\frac{5}{x} = \frac{16}{11}$

B.  $\frac{5}{11} = \frac{x}{16}$

C.  $\frac{5}{x} = \frac{11}{16}$

D.  $\frac{5}{16} = \frac{11}{x}$

14. Simplify:

$$\frac{x^4 y^2}{x^2 y^4}$$

A.  $x^2 y^2$

B.  $\frac{1}{y^2 x^2}$

C.  $\frac{y^2}{x^2}$

D.  $\frac{x^2}{y^2}$

15. Simplify:

$$\frac{6m^{-4}n^3}{-3mn^2}$$

A.  $2m^5 n$

B.  $-\frac{2n}{m^5}$

C.  $-2m^5 n$

D.  $-\frac{2n}{m^3}$

16. Simplify:

$$(-3x^4 y^3)(4x^{-2} y^5)$$

A.  $-12x^6 y^8$

B.  $12x^2 y^8$

C.  $-12x^2 y^8$

D.  $-12x^8 y^{15}$

17. Write in scientific notation:

$$0.138$$

A.  $1.38 \times 10^{-1}$

B.  $1.38 \times 10^1$

C.  $.138 \times 10^{-1}$

D.  $13.8 \times 10^1$

18. Simplify:

$$(-5y^3 + 8y - 3) - (4y^2 + 2y + 9)$$

A.  $-5y^3 - 4y^2 + 10y - 12$

B.  $-5y^3 - 4y^2 + 6y - 12$

C.  $-9y^3 + 6y - 12$

D.  $-9y^2 + 10y - 12$

19. Simplify:  
 $(7y - 8)(2y + 3)$

A.  $14y^2 - 5y - 24$

B.  $9y^2 + 5y - 24$

C.  $14y^2 + 5y + 24$

D.  $14y^2 + 5y - 24$

20. Factor completely:  
 $21x^2 + 35x$

A.  $7(3x^2 + 5x)$

B.  $7x^2(3x + 5)$

C.  $7x(3x + 5)$

D.  $x(21x + 35)$

21. Factor completely:  
 $2m + 6 - am - 3a$

A.  $(m - 3)(a + 2)$

B.  $(m - 3)(2 - a)$

C.  $(m + 3)(2 - a)$

D. prime (not factorable)

22. Identify a factor of the trinomial:  
 $12x^2 - 5x - 3$

A.  $3x - 1$

B.  $3x - 3$

C.  $4x + 3$

D.  $4x - 3$

23. Factor completely:  
 $16y^2 - 25$

A.  $(4y + 5)(4y + 5)$

B.  $(4y - 5)(4y + 5)$

C.  $(4y - 5)(4y - 5)$

D.  $(8y - 25)(y + 1)$

24. Solve:  
 $x^2 - 5x = -6$

A.  $x = -2, x = 3$

B.  $x = 2, x = 3$

C.  $x = -2, x = -3$

D.  $x = 2, x = -3$

25. Solve:

$$y^3 - y = 0$$

A.  $y = -1, y = 0, y = 1$

B.  $y = -1, y = 1$

C.  $y = 0, y = 1$

D.  $y = 1$

26. Simplify:

$$\frac{12x^2 + 6x}{24x + 12}$$

A.  $\frac{2}{x}$

B.  $\frac{x+1}{x+2}$

C.  $\frac{x}{2}$

D.  $\frac{1}{2}$

27. Simplify:

$$\frac{5y+13}{y+1} - \frac{1-7y}{y+1}$$

A.  $\frac{1}{12}$

B. 12

C.  $\frac{-2y+12}{y+1}$

D.  $\frac{12y+12}{y+1}$

28. Simplify:

$$\sqrt{40x^4y^3}$$

A.  $8xy\sqrt{5x^3y^2}$

B.  $4x^2y\sqrt{10}$

C.  $2x^2y\sqrt{10y}$

D.  $4x^2y\sqrt{10x^2y}$

29. Simplify:

$$-5\sqrt{18} + 12\sqrt{72}$$

A.  $87\sqrt{2}$

B.  $9\sqrt{2}$

C.  $57\sqrt{2}$

D. 57

30. Find the x-intercept for:

$$y = -2x + 5$$

A.  $\frac{5}{2}$

B.  $-\frac{5}{2}$

C. 5

D.  $\frac{2}{5}$

# Form B

## Answer Key

- |       |       |
|-------|-------|
| 1. B  | 16. C |
| 2. C  | 17. A |
| 3. A  | 18. B |
| 4. A  | 19. D |
| 5. D  | 20. C |
| 6. C  | 21. C |
| 7. D  | 22. D |
| 8. A  | 23. B |
| 9. A  | 24. B |
| 10. B | 25. A |
| 11. A | 26. C |
| 12. C | 27. B |
| 13. D | 28. C |
| 14. D | 29. C |
| 15. B | 30. A |