

# **Florida College Basic Skills Exit Test**

## **Mathematics**

**Form A**  
**Practice**

1. Simplify:  
 $5 + 3 \times 2 - 12 \div 4$

- A. 1
- B. 7
- C. 8
- D. 13

2. Simplify:  
 $8(2 - 7) \div 2^3$

- A.  $-\frac{20}{3}$
- B. -5
- C.  $\frac{9}{8}$
- D. 9

3. Simplify:  
 $|-9| - |12| + |-5|$

- A. -26
- B. -16
- C. -2
- D. 2

4. Simplify:  
 $5(2x - 3) - (2(3x + 1))$

- A.  $4x - 5$
- B.  $4x - 13$
- C.  $4x - 16$
- D.  $4x - 17$

5. Evaluate the given expression  
when  $x = -4$   
 $x^2 - 3x - 8$

- A. -4
- B. -12
- C. 12
- D. 20

6. Solve for x:  
 $\frac{3}{7}x - 8 = 6$

- A.  $\frac{98}{3}$
- B. 22
- C.  $\frac{50}{3}$
- D. 6

7. Solve for x:  
 $7x - 5 = 3(4x + 5)$

A.  $x = -4$

B.  $x = -2$

C.  $x = 0$

D.  $x = 2$

8. Solve for m:  
 $5m + 2n = 6p$

A.  $m = 6p - 2n$

B.  $m = \frac{6p - 2n}{5}$

C.  $m = 6p + 2n$

D.  $m = \frac{6p + 2n}{5}$

9. Solve:  
 $3x + 1 < 5(x + 1)$

A.  $x < -2$

B.  $x > -2$

C.  $x < 2$

D.  $x > 2$

10. If the sum of a number and 7 is decreased by 8, the result is twice the original number. Choose the equation that could be used to find the number, N.

A.  $(7N) - 8 = 2N$

B.  $8 - (7N) = 2N$

C.  $(N + 7) - 8 = 2N$

D.  $8 - (N + 7) = 2N$

11. The length of a rectangle is 3 ft. less than 4 times its width. The perimeter of the rectangle is 224 ft. What is the length?

A. 89

B. 23

C. 112

D. 36

12. Identify the proportion listed below that solves this problem. If 4 compact discs cost \$22, how much would 9 compact discs cost?

A.  $\frac{4}{x} = \frac{9}{22}$

B.  $\frac{4}{x} = \frac{22}{9}$

C.  $\frac{4}{9} = \frac{22}{x}$

D.  $\frac{4}{22} = \frac{x}{9}$

13. Simplify:

$$\frac{x^5 y^4}{xy^6}$$

A.  $x^6 y^2$

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

C.  $x^6 y^{10}$

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

14. Simplify:

$$\frac{a^9 b^{-4}}{a^{-3} b^{-5}}$$

A.  $a^6 b$

B.  $\frac{a^6}{b}$

C.  $a^{12} b$

D.  $\frac{a^6}{b^9}$

15. Simplify:

$$(p^0 r^{10} t^{-3})(rt^5)$$

A.  $r^{11} t^2$

B.  $\frac{r^{11}}{t^2}$

C.  $\frac{r^2}{t^{11}}$

D.  $pr^{11} t^2$

16. Convert to standard form:

$$3.5 \times 10^{-4}$$

A. 0.000035

B. 0.00035

C. 35,000

D. 350,000

17. Simplify:

$$(5x^2 - 6x - 3) - (2x^2 - 2x + 1)$$

A.  $3x^2 - 8x - 2$

B.  $3x^2 - 4x - 4$

C.  $3x^2 - 4x - 2$

D.  $3x^4 - 4x^2 - 4$

18. Simplify:

$$2x^3 y(7y^4 - 3x^5)$$

A.  $14x^3 y^5 - 3x$

B.  $14x^3 y^5 - 6x^8 y$

C.  $14x^3 y^4 - 6x^{15} y$

D.  $9x^3 y^5 - 5x^8 y$

19. Simplify:

$$(1+3x)(2-x)$$

A.  $2-3x^2$

B.  $2-5x-3x^2$

C.  $2+5x-3x^2$

D.  $2+7x-3x^2$

20. Factor completely:

$$7a^4 - 21a^2 - 7a$$

A.  $7a(a^3 - 3a)$

B.  $7(a^4 - 3a^2 - a)$

C.  $7a(a^3 - 3a - 1)$

D.  $a(7a^3 - 21a - 7)$

21. Factor completely:

$$9x^2 - 4y^2$$

A.  $(3x-2y)(3x+2y)$

B.  $(3x-2y)(3x-2y)$

C.  $(3x+2y)^2$

D.  $(3x-4y)(3x+y)$

22. Factor completely:

$$8x^2 + 2ax - 4bx - ba$$

A.  $(4x+a)(2x-b)$

B.  $(4x^2+a)(2x+b)$

C.  $(4x-a)(2x+b)$

D.  $(4x+a)(2x+b)$

23. Identify a factor of the trinomial:

$$8x^2 + 2x - 3$$

A.  $2x+3$

B.  $2x+1$

C.  $2x-1$

D.  $4x-1$

24. Simplify:

$$\frac{9y^2 - 16}{3y^2 - y - 4}$$

A.  $\frac{3y-4}{-y}$

B.  $\frac{3y+4}{y+1}$

C.  $\frac{3y-4}{y-1}$

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

25. Solve:  
 $2x^2 - 3x - 20 = 0$

A.  $x = -\frac{2}{5}, x = -4$

B.  $x = -\frac{2}{5}, x = 4$

C.  $x = -\frac{5}{2}, x = -4$

D.  $x = -\frac{5}{2}, x = 4$

26. Solve:  
 $y^2 - 4y - 32 = 0$

A.  $x = 8, x = 4$

B.  $x = -8, x = -4$

C.  $x = 8, x = -4$

D.  $x = -8, x = 4$

27. Assuming the variable represents a non-negative number, simplify completely  
 $\sqrt{25a^3}$

A.  $5a\sqrt{5a}$

B.  $a\sqrt{5a}$

C.  $5\sqrt{a^3}$

D.  $5a\sqrt{a}$

28. Simplify:  
 $\sqrt{3}(\sqrt{6} + \sqrt{5})$

A.  $9\sqrt{2} + \sqrt{15}$

B.  $3\sqrt{2} + \sqrt{15}$

C.  $3\sqrt{17}$

D.  $2\sqrt{17}$

29. Find the y-intercept for:

$$2x - 3y = 5$$

A.  $(\frac{5}{2}, 0)$

B.  $(0, -\frac{5}{3})$

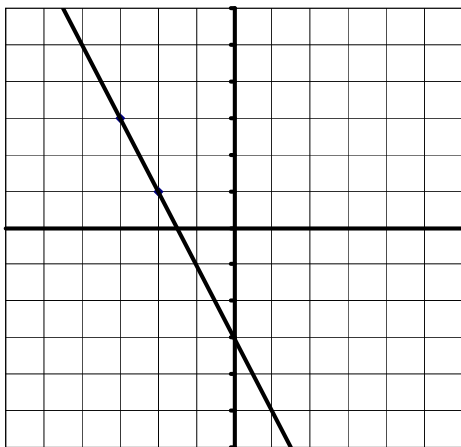
C.  $(0, \frac{5}{2})$

D.  $(-\frac{5}{3}, 0)$

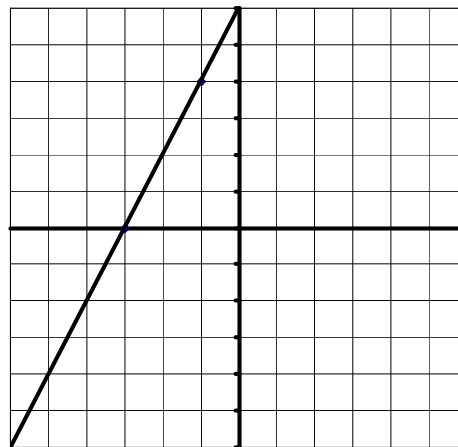
30. Find the equation that best matches the given equation:

$$y = 2x - 3$$

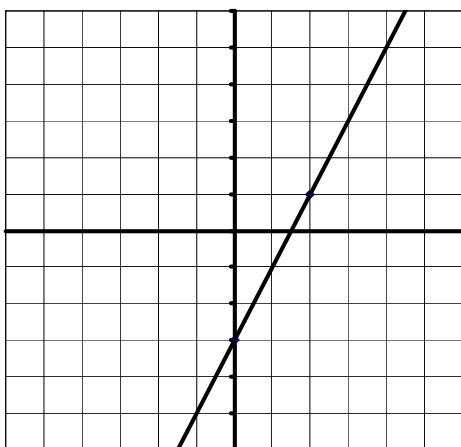
A.



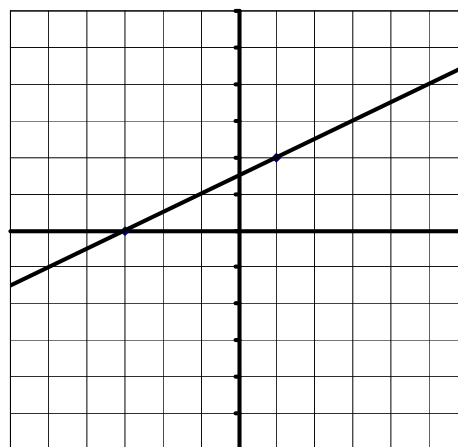
C.



B.



D.



# Form A

## Answer Key

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