

MATH 0097 Final Exam Review

Revised Summer 2009

This review does not include all topics covered on your Final Exam. However, it will provide a good review of most of the topics. The Math 0097 Final Exam will contain at most 40 multiple choice questions.

Choose the best answer for each question.

1. When simplified $\frac{-5(2+1)+5-8}{-2-4}$ is
 - A. 2
 - B. 3
 - C. $\frac{3}{2}$
 - D. $\frac{7}{2}$
2. If $x = -3$ and $y = 2$, then $3x^2 - xy + 5y^2$ is
 - A. 107
 - B. 95
 - C. 53
 - D. 41
3. When simplified $[2(x-3)+2] - [4(x-1)-2x]$ is
 - A. $4x-8$
 - B. $-2x$
 - C. 0
 - D. 8
4. The solution set for $10y+9=19$ is
 - A. $\left\{\frac{14}{5}\right\}$
 - B. $\{1\}$
 - C. $\{0\}$
 - D. $\left\{-\frac{71}{10}\right\}$
5. The solution set for $6x-4-4x=2x-4$ is
 - A. $\{2\}$
 - B. $\left\{\frac{2}{3}\right\}$
 - C. \emptyset
 - D. $\{x|x \text{ is a real number}\}$
6. The solution set for $-y-2(2y-1)=5(1-y)$ is
 - A. $\{-2\}$
 - B. \emptyset
 - C. $\{2\}$
 - D. $\{x|x \text{ is a real number}\}$
7. When simplified completely $\frac{x^{-8}}{y^{-4}}$ is equivalent to
 - A. $\frac{x^8}{y^4}$
 - B. $\frac{1}{x^8y^4}$
 - C. $\frac{y^4}{x^8}$
 - D. x^8y^4
8. -5^0 is equivalent to
 - A. 5
 - B. 1
 - C. -1
 - D. -5

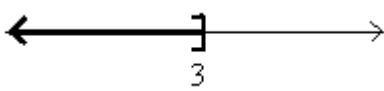
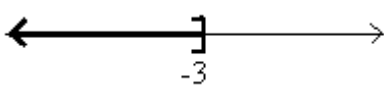
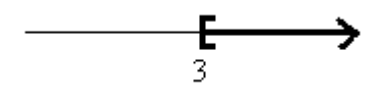
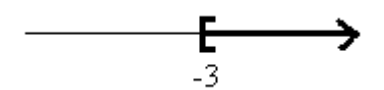
9. When simplified completely $x^{-5} \cdot x \cdot x^{-2}$ is
- A. $\frac{1}{x^6}$
 B. $\frac{1}{x^7}$
 C. x^{-7}
 D. x^{-6}
10. 1.5×10^5 is equivalent to
- A. 0.0000015
 B. 0.000015
 C. 150,000
 D. 1,500,000
11. 0.0000037 written in scientific notation is
- A. 3.7×10^{-6}
 B. $.37 \times 10^{-5}$
 C. 3.7×10^6
 D. 37×10^{-7}
12. When simplified $(5x^3 + 2x^2 - 3x) + (-6x^3 + 2x^2 + 7x)$ is
- A. $-x^3 + 2x^2 + 4x$
 B. $x^3 + 4x^2 + 10x$
 C. $x^3 + 4x^2 + 4x$
 D. $-x^3 + 4x^2 + 4x$
13. When simplified $(-4x^2 - 6x + 2) - (3x^2 + 2x - 7)$ is
- A. $-7x^2 - 4x + 9$
 B. $-7x^2 - 8x + 9$
 C. $x^2 - 4x - 5$
 D. $x^2 - 8x + 9$
14. When simplified $(4x^5)(-2x^3)^2$ is
- A. $2x^{10}$
 B. $-8x^{10}$
 C. $8x^{11}$
 D. $16x^{11}$
15. When simplified $-3x^2(x^2 - 3x - 1)$ is
- A. $-3x^4 + 9x^3 + 3x^2$
 B. $-3x^4 - 3x - 1$
 C. $-3x^4 - 9x^3 - 3x^2$
 D. $-3x^2 - 9x + 3$
16. When simplified $(3x - 1)(3x + 1)$ is
- A. $9x^2 + 1$
 B. $9x^2 - 6x - 1$
 C. $9x^2 - 1$
 D. $9x^2 + 6x - 1$
17. When simplified $(x - 5)^2$ is
- A. $x^2 + 25$
 B. $x^2 + 10x + 25$
 C. $x^2 - 25$
 D. $x^2 - 10x + 25$
18. $\frac{8x^3 - 6x^2 - x + 5}{2x}$ is equivalent to
- A. $4x^2 - 3x - 2 + \frac{5x}{2}$
 B. $4x^2 - 3x - \frac{1}{2} + \frac{5}{2x}$
 C. $4x^2 - 6x + 4$
 D. $4x^2 - 7x + 5$
19. The only number in $\left\{-2.7, -\frac{5}{3}, 0, 0.\bar{3}, 4, \sqrt{48}\right\}$ that is irrational is
- A. $-\frac{5}{3}$
 B. $0.\bar{3}$
 C. 4
 D. $\sqrt{48}$
20. The greatest common factor of $4x^5 - 8x^4 + 12x^3$ is
- A. 4
 B. $4x$
 C. $4x^3$
 D. $4x^5$

21. One of the factors of $x^2 - 5x + 6$ is
- $(x+3)$
 - $(x-2)$
 - $(x-1)$
 - $(x-6)$
22. One of the factors of $6t^2 - 19t - 20$ is
- $(t+5)$
 - $(2t+5)$
 - $(6t+5)$
 - $(t+1)$
23. The complete factorization of $16x^2 + 48x + 36$ is
- $(8x+12)(2x+3)$
 - $4(2x+3)^2$
 - $4(4x+1)(x+9)$
 - $(4x+9)^2$
24. One of the factors of $16x^2 - 25$ is
- $(2x-2)$
 - $(8x-5)$
 - $(16x-25)$
 - $(4x+5)$
25. One of the factors of $8x^3 + 27$ is
- $(4x^2 - 6x + 9)$
 - $(4x^2 - 6x - 9)$
 - $(4x^2 + 6x + 9)$
 - $(2x^2 - 6x + 3)$
26. One of the factors of $x^2 + 2x - xy - 2y$ is
- $(x-2)$
 - $(2-x)$
 - $(x-y)$
 - x
27. The solution set for $x^2 = 16$ is
- $\{-4\}$
 - $\{4\}$
 - $\{16\}$
 - $\{-4, 4\}$
28. The solution set for $6x^2 + x = 2$ is
- $\left\{-\frac{3}{2}, 2\right\}$
 - $\left\{-\frac{1}{2}, \frac{2}{3}\right\}$
 - $\left\{\frac{1}{2}, -\frac{3}{2}\right\}$
 - $\left\{-\frac{2}{3}, \frac{1}{2}\right\}$
29. $3(5x+0) = 3(0+5x)$ is an example of the
- Commutative Property
 - Associative Property
 - Distributive Property
 - Identity Property
30. The only phrase below which represents $x - y$ is
- x subtracted from y
 - y less than x
 - y minus x
 - y decreased by x

31. If $2x - 3y = 6$ is solved for y , then $y =$

- A. $-\frac{3}{2}x - 3$
- B. $\frac{3}{2}x + 3$
- C. $\frac{2}{3}x - 2$
- D. $-\frac{2}{3}x + 2$

32. The graph of $6 - 3x \leq -3$ most closely resembles

- A. 
- B. 
- C. 
- D. 

33. The solution for $4x + 1 < 9x - 4$ in interval notation is

- A. $(-\infty, 1)$
- B. $(-\infty, -1)$
- C. $(1, \infty)$
- D. $(-1, \infty)$

34. $(-6, 10)$ is in quadrant

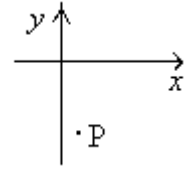
- A. I
- B. II
- C. III
- D. IV

35. $-|3 - 7| =$

- A. -10
- B. -4
- C. 4
- D. 10

36. The coordinates of point P are possibly

- A. $(1, -5)$
- B. $(-5, 1)$
- C. $(-5, -1)$
- D. $(-1, -5)$

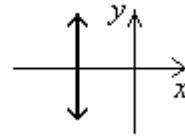


37. The only ordered pair below that is a solution for $3x + y = 8$ is

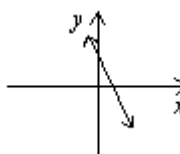
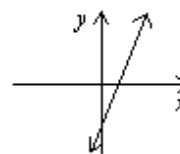

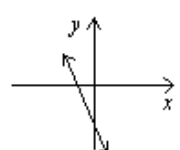
- A. $(2, 0)$
- B. $(3, -1)$
- C. $(0, 4)$
- D. $(-2, 2)$

38. The only equation below that could be the equation of this line is

- A. $y = 3$
- B. $y = -3$
- C. $x = 3$
- D. $x = -3$



39. The graph of $2x - y = 6$ most closely resembles

- A. 
- B. 
- C. 
- D. 

40. The supplement of an angle is 4 times the measure of the angle. Let x represent the angle measure. An equation that could be used to solve for x is

- A. $180 - x = 4x$
- B. $180 + 4x = x$
- C. $90 - x = 4x$
- D. $90 + 4x = x$

41. Litsu invested some money at 4% and \$3000 more than that at 5%. The two investments produced a total of \$600 in interest in 1 year. If x represents the amount invested at 4%, then an equation that could be used to represent this problem is

- A. $.04(x + 3000) + .05x = 600$
 B. $.4(x + 3000) + .5x = 600$
 C. $.04x + .05(x + 3000) = 600$
 D. $.4x + .5(x + 3000) = 600$

42. The x -intercept of $4x - y = 8$ is

- A. $(0, -8)$
 B. $(0, 2)$
 C. $(2, 0)$
 D. $(-8, 0)$

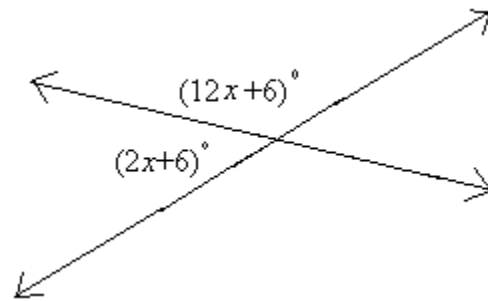
43. A rectangular box has a length of 10", a width of 5" and a height of 4". The volume of the box is

- A. 19 in^2
 B. 19 in^3
 C. 200 in^2
 D. 200 in^3

44. The length of a rectangle is 7 ft. longer than the width, W . The area of the rectangle is 63 ft^2 . An equation that could be used to find W is

- A. $2W + 2(W + 7) = 63$
 B. $W + (W + 7) = 63$
 C. $W(W + 7) = 63$
 D. $W^2 + (W + 7)^2 = 63$

- 45.



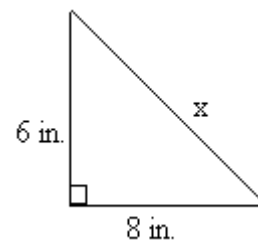
In the figure above, the measure of the smaller angle is

- A. 5.6°
 B. 12°
 C. 30°
 D. 38°

46. A cashier has a total of 28 bills made up of tens and twenties. The total value of the money is \$400. If x represents the number of tens, then an equation that represents this problem is

- A. $10x + 20(28 - x) = 400$
 B. $10(28 - x) + 20x = 400$
 C. $10x + 20(x - 28) = 400$
 D. $10(28 - x) + 20x = 400$

47. The value of x in the triangle below is



- A. $\sqrt{14}$ in.
 B. 10 in.
 C. 14 in.
 D. 100 in.

Answers:

- | | |
|-------|-------|
| 1. B | 28. D |
| 2. C | 29. A |
| 3. C | 30. B |
| 4. B | 31. C |
| 5. D | 32. C |
| 6. B | 33. C |
| 7. C | 34. B |
| 8. C | 35. B |
| 9. A | 36. A |
| 10. C | 37. B |
| 11. A | 38. D |
| 12. D | 39. B |
| 13. B | 40. A |
| 14. D | 41. C |
| 15. A | 42. C |
| 16. C | 43. D |
| 17. D | 44. C |
| 18. B | 45. C |
| 19. D | 46. A |
| 20. C | 47. B |
| 21. B | |
| 22. C | |
| 23. B | |
| 24. D | |
| 25. A | |
| 26. C | |
| 27. D | |