Practice Midterm Exam Name:_____

Algebra 1 CP

1. Write an algebraic expression for 7 less than the square of a number.

A. $7 < x^2$ **B.** $7 > x^2$ **C.** $7 - x^2$ **D.** $x^2 - 7$

2. Evaluate: $6a^2 + b(c - 3a)$ *if* $a = 3,\ b = 5,\ c = 16$

A. 116 **B.** 89 **C.** 125 **D.** 71

3. What is the simplest form of: $4[5t + 2(3t + 5)]$?

A. $4(11t + 10)$ **B.** $26t + 10$ **C.** $44t + 40$ **D.** $84t$

4. Distance traveled (d) equals the rate (r) times the time (t). If Jenny drove at a rate of 57 mph for two and a half hours, how far did she travel?

A. 28.5 miles **B.** 114 miles **C.** 157 miles **D.** 142.5 miles

5. What fractions are written in order from least to greatest?

A. $\frac{7}{13}, \frac{6}{11}, \frac{9}{14}$ **B.** $\frac{6}{11}, \frac{7}{13}, \frac{9}{14}$ **C.** $\frac{9}{14}, \frac{6}{11}, \frac{7}{13}$ **D.** $\frac{7}{13}, \frac{9}{14}, \frac{6}{11}$

6. Simplify: $\frac{-3x + 12}{-6}$

A. $3x + 2$ **B.** $-3x - 2$ **C.** $-\frac{1}{2}x + 2$ **D.** $\frac{1}{2}x - 2$

7. Fill in the blank: $\frac{7}{3}$ _____ -7

A. = **B.** > **C.** <

8. Solve: m – (-4) = 7

A. 3 **B.** -3 **C.** 11 **D.** -11

9. Solve: 7 – x = 2

A. 9 **B.** -9 **C.** 5 **D.** -5

10. The sum of two integers is -46. The greater integer is 13. What is the lesser integer?

A. 59 **B.** -59 **C.** -33 **D.** 33

11. Solve: $\frac{m}{6} = -18$

A. -108 **B.** 108 **C.** 3 **D.** -3

12. Solve: $-26y = 884$

A. 910 **B.** 858 **C.** 34 **D.** -34

13. Solve: $\frac{3}{5}x = 15$

A. 45 **B.** 5 **C.** 25 **D.** 75

14. Solve: $5x + 3 = 23$

A. 4 **B.** -4 **C.** 5 **D.** -5

15. Solve: $\frac{x}{7} = \frac{13}{42}$

A. 91 **B.** 6 **C.** $2\frac{1}{6}$ **D.** $\frac{6}{13}$

16. Solve: $\frac{8}{6} = \frac{a + 4}{a - 1}$

A. 16 **B.** 12 **C.** 24 **D.** 32

17. Solve: $\frac{n}{3} - 8 = -2$

A. -30 **B.** 30 **C.** -18 **D.** 18

18. Solve: $-14 = \frac{c + 12}{-6}$

A. -72 **B.** 72 **C.** 96 **D.** -96

19. Solve: $2x + 7 = 5x + 16$

A. -3 **B.** $\frac{2}{3}$ **C.** $-\frac{23}{3}$ **D.** 3

20. Solve for y: $2x - y = 3$

A. y = 2x - 3 **B.** y = -2x - 3 **C.** y = -2x + 3 **D.** y = 2x + 3

21. By federal law, the ratio of the width to the length of the U.S. flag is 10 to 19. If you want to make a flag with an 8-foot width, what should be its length?

A. 23.75 ft **B.** 15.2 ft **C.** 4.21 ft **D.** 152 ft

22. What is 14% of 32?

A. 4480 **B.** 4.48 **C.** 228 **D.** 43.75

23. Ninety is what percent of 200?

A. 55% **B.** 40.5% **C.** 45% **D.** 20%

24. If *y* varies **directly** as x, and *y* = 7.5 when *x* = 2, find *y* when x = 5.

A. 18.75 **B.** 1.33 **C.** 3 **D.** 75

25. Write the equation in **slope-intercept form**: 2x – 3y = 6

A. $y = -\frac{2}{3}x - 2$ **B.** $y = \frac{2}{3}x - 2$ **C.** $y = \frac{2}{3}x + 2$ **D.** It's already in slope-intercept form

26. Identify the **slope** of the line with the equation: y – 3x = 5

A. -3 **B.** 3 **C.** $\frac{1}{3}$ **D.** 5

27. Write the equation for the line that passes through (3, 2) and (4, 9).

A. y = 7x + 2 **B.** y = 7x – 11 **C.** $y = \frac{1}{7}x + \frac{11}{7}$ **D.** y = 7x – 19

28. Write the equation in **standard form**: $y = -\frac{1}{2}x + 1$

A. $x + \frac{1}{2}y = 1$ **B.** $\frac{1}{2}x + y = 1$ **C.** $x + 2y = 2$ **D.** It's already in standard form

29. Write an equation for the line that passes through (4, -5) and is **perpendicular** to the line y = 2x + 3

A. $y = -\frac{1}{2}x + 7$ **B.** $y = \frac{1}{2}x + 3$ **C.** $y = 2x - 3$ **D.** $y = -\frac{1}{2}x - 3$

30. Solve: $v - 8 < 35$

A. $v < 43$ **B.** $v > 27$ **C.** $v < 27$ **D.** $v > 4$

31. Solve: $w + 3.81 < -14.6$

A. $w < 10.79$ **B.** $w > -18.41$ **C.** $w > 10.79$ **D.** $w < -18.41$

32. Solve: $m - \frac{3}{8} > \frac{1}{2}$

A. $m > \frac{7}{8}$ **B.** $m < \frac{7}{8}$ **C.** $m < \frac{1}{8}$ **D.** $m > \frac{1}{8}$

33. Solve: $6n \geq 5n + 19$

A. $n \geq -19$ **B.** $n \geq 19$ **C.** $n \leq 19$ **D.** $n \leq \frac{11}{19}$

34. Solve: $3s - 12 < 2s + 10$

A. $s > 2$ **B.** $s > -2$ **C.** $s < 22$ **D.** $s < -22$

35. Solve: $-18 \geq 3t$

A. $t \leq 6$ **B.** $t \geq -6$ **C.** $t \leq -6$ **D.** $t \geq 6$

36. Solve: $\frac{5}{14} > -\frac{2}{7}d$

A. $d < \frac{5}{4}$ **B.** $d > \frac{5}{4}$ **C.** $d < -\frac{5}{4}$ **D.** $d > -\frac{5}{4}$

37. Solve: $-3.5z < 42$

A. $z > 12$ **B.** $z < 12$ **C.** $z < -12$ **D.** $z > -12$

38. Solve: $4w - 6 > 6w - 20$

A. $w < 7$ **B.** $w < 2$ **C.** $w < -7$ **D.** $w < -2$

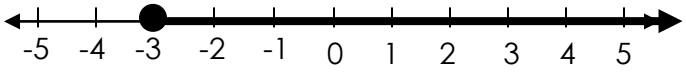
39. Solve: $-14 > 5(2m - 3) - m$

A. $m < 1$ **B.** $m < \frac{1}{9}$ **C.** $m > 1$ **D.** $m > \frac{1}{9}$

40. Solve: $8r - (5r + 4) \geq -31$

A. $r \leq -9$ **B.** $r \geq -9$ **C.** $r \geq 9$ **D.** $r \leq 9$

41. The graph shows the solution set for which of the following inequalities?

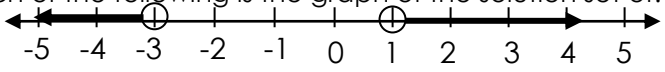


A. $x < 3$ **B.** $x \leq -3$ **C.** $x \geq -3$ **D.** $x > -3$

42. Solve: $-25 < 15x - 10 < 20$

A. $-1 < x < \frac{4}{3}$ **B.** $x < 2$ **C.** $-\frac{5}{3} < x < 2$ **D.** $-1 < x < 2$

43. Which of the following is the graph of the solution set of: $y < -3 \quad or \quad y > 1$?

A.


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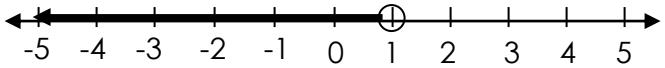
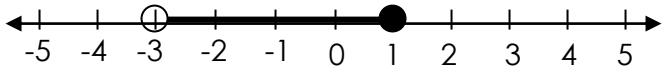
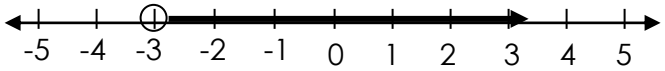
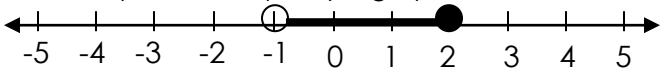


C.


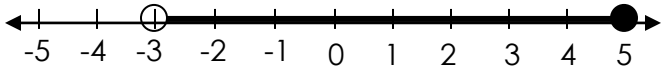
D.


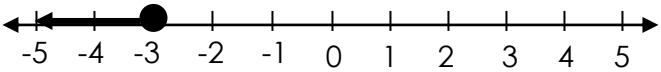
44. What compound inequality is graphed below?

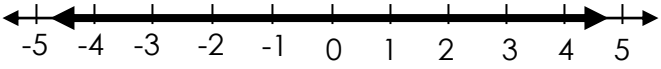


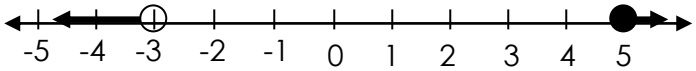
A. $-1 < n < 2$ **B.** $-1 \le n < 2$ **C.** $n \ge -1$ or $n < 2$ **D.** $-1 < n \le 2$

45. Which of the following is the graph of the solution set of: $-4 < 3t + 5 \le 20$

A.


B.


C.


D.


46. Solve: $3|x-8| = 132$

A. 44, -44 **B.** -52, 52 **C.** 52 **D.** -36, 52

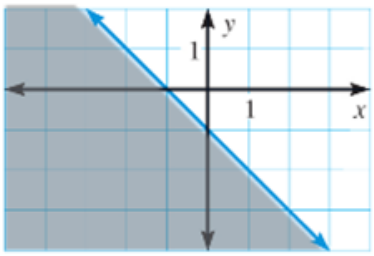
47. Solve: $|2x+8| < 4$

A. -6 < x < -2 **B.** x < -2 **C.** -2 < x < 2 **D.** x < -6 or x > -2

48. Solve: $|2x-7| > 1$

A. 3 < x < 4 **B.** x > 4 **C.** x < 3 or x > 4 **D.** x < -4 or x > 4

49. The graph of which inequality is shown?



A. $y \le -x - 1$

B. $y \ge -x - 1$

C. $y < -x - 1$

D. $y > -x - 1$

50. Which ordered pair is a solution of the system: $x + 2y = -8$
$-4x + y = 5$

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

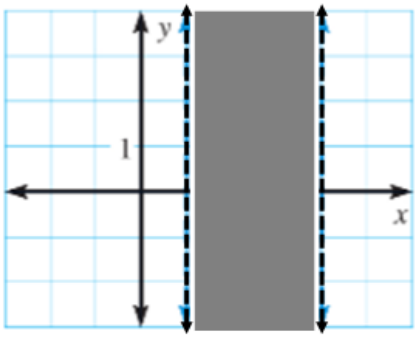
51. Find the value of x in the system: $x - 2y = 4$
$3x + 4y = 2$

A. -2 **B**. 2 **C**. -1 **D**. 3

52. You pay $24.50 for 10 gallons of gasoline and 1 quart of oil at a gas station. Your friend pays $22 for 8 gallons of the same gasoline and 2 quarts of the same oil. Find the cost of a gallon of gas.

A. $5.92 **B.** $2.25 **C.** $3.88 **D.** The cost cannot be determined

53. Which system of inequalities is represented by the graph?



A. $x < 1, x > 4$

B. $y > 1, y < 4$

C. $x \geq 1, x \leq 4$

D. $x > 1, x < 4$

Answers:

1. D	2. B	3. C	4. D	5. A	6. D	7. B	8. A	9. C	10. B	11. A	12. D	13. C	14. A	15. C
16. A	17. D	18. B	19. A	20. A	21. B	22. B	23. C	24. A	25. B	26. B	27. D	28. C	29. D	30. A
31. D	32. A	33. B	34. C	35. D	36. D	37. D	38. A	39. B	40. B	41. C	42. D	43. A	44. D	45. A
46. D	47. A	48. C	49. A	50. B	51. B	52. B	53. D							