Name: _____

Compass Practice Form A

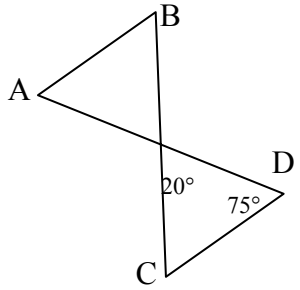
1. $\dfrac{(4 \times 10^{7})(3 \times 10^{4})}{2 \times 10^{9}} =$

   A. 12,000
   B. 2,400
   C. 1,400
   D. 600
   E. 50

2. If 6 pounds of apples cost $4.20, what is the cost of 8 pounds?

   A. $1.80
   B. $5.00
   C. $5.60
   D. $6.50
   E. $6.80

3. Find the measure of angle B, given that AB is parallel to CD.



   A. 20
   B. 55
   C. 70
   D. 75
   E. 85

4. 15.7 – 2.06 =

   A. 1.364
   B. 13.01
   C. 13.64
   D. -13.01
   E. -13.64

5. For all x, $(x - 5)^2$ =

   A. $x^2 + 25$
   B. $x^2 - 25$
   C. $x^2 + 10x + 25$
   D. $x^2 - 10x + 25$
   E. $x^2 - 10x - 25$

6. $(-2)^5$ =

   A. –32
   B. –10
   C. 10
   D. 16
   E. 32

7. What is the greatest common divisor of 8, 12, 16?

   A. 2
   B. 4
   C. 6
   D. 8
   E. 16

8. For all x, $(3x^2y)^3$ =

   A. $9x^6y^3$
   B. $27x^6y^3$
   C. $9x^6y$
   D. $27x^3y^3$
   E. $27x^5y^3$

9. A liquid weighing 20 ounces contains 15% alcohol. How many ounces of alcohol does it contains?

A. 3
B. 5
C. 15
D. 30
E. 45

10. The solution of the inequality $2 - x \leq 3x - 7$ is

A. $x \geq 9$
B. $x \leq 9$
C. $x \geq \frac{9}{4}$
D. $x \leq \frac{9}{4}$
E. $x \geq 5$

11. For all x and y, $y(x + y) - x(x - y) =$

A. $y^2 - x^2$
B. $x^2 - y^2$
C. $xy - x^2$
D. $y^2 + 2xy - x^2$
E. $-x^2 + xy + 2y$

12. $|-5| + |-1| - |2| =$

A. –6
B. –4
C. 2
D. 4
E. 8

13. For c = 2 and d = -4, the value of $3cd + 2d - c$ is

A. –34
B. –18
C. –3
D. 14
E. 34

14. $\frac{1}{3} - \frac{4}{7} + \frac{5}{6} =$

A. 25 / 42
B. 1 / 8
C. 1 / 21
D. 5 / 8
E. 2

15. One factor of $2a^2 - ab - 3b^2$ is

A. (2a – 3b)
B. (2a + 3b)
C. (a – 3b)
D. (a + 3b)
E. (2a – b)

16. A collection of nickels and dimes is worth \$1.25. If there are 17 coins and n represents the number of nickels and d represents the number of dimes, then one equation is $n + d = 17$. The other equation is

A. $5n + 10d = 1.25$
B. $10n + 5d = 1.25$
C. $10n + 5d = 125$
D. $n + d = 125$
E. $5n + 10d = 125$

17. If $x + 2 = 5 - 3(x - 1)$, then $x =$

A. 0
B. 1 / 2
C. 2 / 3
D. 3 / 2
E. 4

18. $60 \div 300 =$

A. 5
B. 2
C. 0.2
D. 0.5
E. 2.5

19. If an engine requires 22 gallons of gasoline a week, how many gallons of gasoline are required in 10 days?

A. 12
B. 27.5
C. 31.42
D. 154
E. 220

20. Given $x = -3$ and $y = 2$, the expression below with the smallest value is

A. $3xy$
B. x^2y
C. xy^2
D. $x + 5y$
E. $7x + y$

21. The solution of $5 - 3x = 17$ is $x =$

A. -22 / 3
B. -4
C. 4
D. 22 / 3
E. 15

22. For all x, $2x^2 - 5x - 12 =$

A. $(2x - 3)(x - 4)$
B. $(2x - 6)(x + 2)$
C. $(2x + 3)(x - 4)$
D. $(2x - 4)(x + 3)$
E. $(2x - 3)(x + 4)$

23. The cost of renting a van is $27 plus 30 cents per mile. If the cost of renting is C and m is the number of miles the van is driven, then

A. $C = 27m + 30$
B. $C = 30m + 27$
C. $C = 27 + .30m$
D. $C = 30 + .27m$
E. $C = (27 + .30)m$

24. The solution of $4x - 5 = 2(x + 1)$ is between

A. 0 and 1
B. 1 and 2
C. 3 and 4
D. 5 and 6
E. 7 and 8

25. For non-zero x and y, $\frac{x^4y^3}{x^6y^2} =$

A. x^2y
B. $\frac{x^2}{y}$
C. $x^{10}y^5$
D. $\frac{y}{x^2}$
E. $\frac{1}{x^{10}y^6}$

26. Given the domain is {2, 3, 4, 5, 6} the solution set of $2x - 1 > 5$ is

A. {3}
B. {3, 4}
C. {4, 5, 6}
D. {2, 3}
E. {4, 5}

27. Five less than twice a number is –1. What is the number?

A. -3
B. 1 / 3
C. 1 / 2
D. 2
E. 3

28. A car travels 100 miles in 1 hour and 40 minutes. The average speed is

A. 55 mph
B. 60 mph
C. 62 mph
D. 65 mph
E. 70 mph

29. If $f(x) = x^2 - 2x + 1$, then $f(-3)$

A. 2
B. 4
C. 13
D. 14
E. 16

30. In the solution of the system of equations $2x + y = 1$ and $3x + y = 4$, the variable of y is

A. -5
B. -3
C. 1
D. 3
E. 5

31. For all positive x, $\sqrt{32x^5}$ =

A. $4x^2\sqrt{2x}$
B. $2x^2\sqrt{4x}$
C. $4x\sqrt{x}$
D. $2x^3\sqrt{4x}$
E. $4x^3$

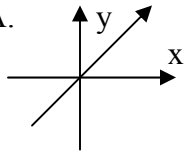
32. If $x^2 = 3x$, then x =

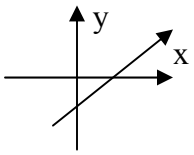
A. 0 only
B. 0 or 3
C. –3 only
D. 0 or –3
E. 3 only

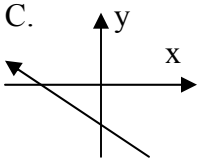
33. If $\frac{x}{2} + \frac{1}{3} = \frac{5}{6}$, then x =

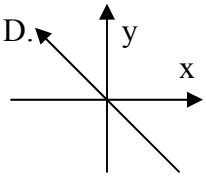
A. 10 / 3
B. 4 / 3
C. –1
D. 1
E. 0

34. Which is the graph of y = -x?

A. 

B. 

C. 

D. 

35. For $x \neq \pm 1$, $\frac{1}{x-1} - \frac{1}{x+1}$ is the same as

A. $\frac{2}{x^2 - 1}$
B. 0
C. 1 / x
D. $\frac{2x+1}{x^2 - 1}$
E. 2 / x

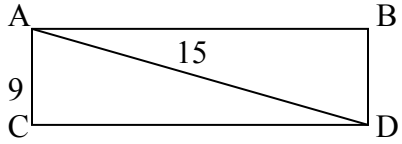
36. The slope of the graph of $x - 2y = 6$ is

A. -2
B. -1 / 2
C. 1
D. 1 / 2
E. 6

37. $(-8)^{2/3} =$

A. 16 / 3
B. –16 / 3
C. –4
D. –2
E. 4

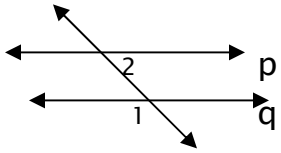
38. What is the perimeter of the rectangle ABCD?



A. 42
B. 24
C. 12
D. 35
E. 432

39. In the figure below p and q are parallel. What is the sum of the measures of angle 1 and angle 2?

A. 90°
B. 100°
C. 180°
D. 270°
E. 360°



40. If the length, L, of a rectangle is tripled and the width, W, is decreased by 2, then the area is

A. (2L) (W + 3)
B. (3L) (W – 2)
C. (3L) (W + 2)
D. (2L) (W – 3)
E. (3L) + (W – 2)

ANSWERS:

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

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