Pre-Algebra
REVIEW for FINAL EXAM

1. What is the value of $*$? $\dfrac{6}{8} = \dfrac{*}{24}$

[A] 6   [B] 18   [C] 144   [D] 24

2. Write $4\dfrac{3}{4}$ as an improper fraction.

[A] $\dfrac{43}{4}$ [B] $\dfrac{19}{4}$ [C] $\dfrac{4}{19}$ [D] $\dfrac{4}{43}$

3. Write $\dfrac{38}{7}$ as a mixed number.

[A] $1\dfrac{5}{7}$ [B] $1\dfrac{6}{7}$ [C] $5\dfrac{7}{3}$ [D] $5\dfrac{3}{7}$

4. Multiply: $\dfrac{6}{5} \times \dfrac{5}{9}$

[A] $4\dfrac{1}{6}$ [B] $\dfrac{2}{3}$ [C] 1   [D] $\dfrac{11}{14}$

5. Divide: $2\dfrac{2}{7} \div 3\dfrac{3}{4}$

[A] $\dfrac{8}{21}$ [B] $\dfrac{3}{14}$ [C] $\dfrac{64}{105}$ [D] $8\dfrac{4}{7}$

6. Find the LCD: $\dfrac{3}{7}, \dfrac{10}{21}, \dfrac{1}{6}$

[A] 84   [B] 42   [C] 21   [D] 126

7. Add: $4\dfrac{1}{4} + 1\dfrac{1}{9}$

[A] $5\dfrac{2}{13}$ [B] 6   [C] $8\dfrac{3}{13}$ [D] $5\dfrac{13}{36}$

8. Subtract: $9 - 4\dfrac{1}{2}$

[A] $8\dfrac{1}{2}$ [B] $4\dfrac{1}{2}$ [C] $5\dfrac{1}{2}$ [D] $13\dfrac{1}{2}$

9. Simplify. $\left(\dfrac{2}{5} + \dfrac{1}{2}\right) \div \dfrac{1}{6}$

[A] $5\dfrac{2}{5}$ [B] $\dfrac{9}{20}$ [C] $\dfrac{3}{20}$ [D] $\dfrac{4}{15}$

10. Find the greatest common factor of 4 and 6.

[A] 4   [B] 2   [C] 3   [D] 1

11. Find the least common multiple of 20, 44, and 88.

[A] 880   [B] 220   [C] 440   [D] 330

12. Round 2.327 liters to the nearest tenth of a liter.
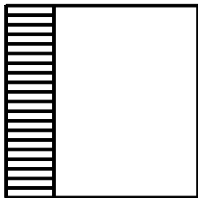
[A] 2.33 L   [B] 2.4 L   [C] 2.3 L   [D] 2.34 L

13. Write a decimal to estimate the amount of area shaded.

[A] 2.5   [B] 0.75   [C] 0.25   [D] 0.5

14. Write 0.45 as a reduced fraction.

[A] $\dfrac{45}{100}$ [B] $\dfrac{3}{10}$ [C] $\dfrac{9}{20}$ [D] $\dfrac{4}{5}$

15. Add: 7.92 + 5.95 + 7.54

[A] 21.41   [B] 21.42   [C] 21.51   [D] 22.41

16. Solve: $x + 2.2 = 6.3$

[A] 4.1   [B] 13.86   [C] 8.5   [D] 3.1

17. Simplify: $53.8 - 4.8 \cdot 0.21$

[A] 10.29   [B] 10.311   [C] 52.792   [D] 51.792

18. Solve: $2.4 = 0.8y$

[A] 3   [B] 4   [C] 0.3   [D] 19.2

19. Complete: 16 in. = _____ ft

[A] 192   [B] $5\frac{1}{3}$ [C] $2\frac{2}{3}$ [D] $1\frac{1}{3}$

20. Complete: 50.4 mm = _____ cm

[A] 5040   [B] 5.04   [C] 504   [D] 0.504

21. Convert 10 inches to centimeters.

[A] 0.39 cm   [B] 25.40 cm   [C] 3.94 cm   [D] 254.00 cm

22. Write the following phrase as a rate in lowest terms.

       210 sales for 154 returns

[A] $\dfrac{11 \text{ sales}}{15 \text{ returns}}$ [B] $\dfrac{15 \text{ sales}}{11 \text{ returns}}$ [C] $\dfrac{210 \text{ returns}}{154 \text{ sales}}$ [D] $\dfrac{30 \text{ returns}}{22 \text{ sales}}$

23. Which of the following is NOT equal to the ratio 12 to 20?

[A] $\dfrac{5}{3}$ [B] 9:15   [C] $\dfrac{3}{5}$ [D] 3:5

24. Solve: $\dfrac{3}{6} = \dfrac{x}{24}$

[A] 5   [B] 12   [C] 9   [D] 17

25. If 4 cans of apricots cost $17.20, how many cans of apricots can be purchased with $38.70?

[A] 11   [B] 8   [C] 9   [D] 10

26. Write $2\frac{1}{4}$% as a decimal.

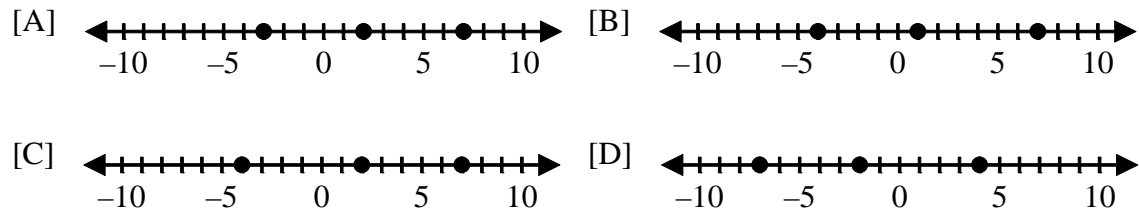[A] 0.0225　　　　　[B] 225　　　　　[C] 0.225　　　　　[D] 2.25

27. The regular price of a suit is \$105. It is on sale at 28% off. What is the sale price?

[A] \$77.00　　　　　[B] \$75.60　　　　　[C] \$29.40　　　　　[D] \$28.00

28. What percent of 5 is 1?

[A] $\frac{1}{20}$%　　　　　[B] 0.2%　　　　　[C] 5%　　　　　[D] 20%

29. Which of the following number lines shows the graph of 7, 2, and –4?

[A]
```
−10    −5    0    5    10
```

[B]
```
−10    −5    0    5    10
```

[C]
```
−10    −5    0    5    10
```

[D]
```
−10    −5    0    5    10
```

30. Add: (–6) + 4 + (–6)

[A] –8　　　　　[B] –4　　　　　[C] 8　　　　　[D] 16

31. Solve: $x - 2 = 6$

[A] 4　　　　　[B] –4　　　　　[C] –8　　　　　[D] 8

32. Multiply: (–3)(7)(–6)

[A] 126　　　　　[B] 2　　　　　[C] –2　　　　　[D] –126

33. Simplify: $(-10)^2$

[A] –100　　　　　[B] 100　　　　　[C] –20　　　　　[D] 20

34. Simplify: $(18 + 7 \cdot 18 \div 7 - 15) \div 7$

[A] 11　　　　　[B] –4　　　　　[C] 3　　　　　[D] 449

35. Simplify: $4x + 5(x + 4)$

[A] $-x + 20$ [B] $9x + 20$ [C] $9x + 4$ [D] $9x - 20$

36. Subtract: $(-7) - (-4)$

[A] -11   [B] -3   [C] 3   [D] 11

37. Simplify: $-(-5) - 5(9 - 8)$

[A] –32   [B] –10   [C] 0   [D] –58

38. Evaluate $a - b + c$ if $a = -7$, $b = -1$, and $c = -4$.

[A] -12 [B] -10 [C] -4 [D] -2

39. Evaluate $\dfrac{y}{2x} - z$ for $x = 2$, $y = 16$, and $z = 1$.

[A] 3   [B] 9   [C] –6   [D] 5

40. Multiply: $-4(x + 2)$

[A] $-4x + 8$ [B] $-4x - 2$ [C] $-4x - 8$ [D] $-4x + 2$

41. Simplify: $4x - 8y - 9x - 7y$

[A] $-5x - 15y$ [B] $13x - 15y$ [C] $-5x + y$ [D] $13x + y$

42. Which of the following is a solution of the equation $6x - 5 = -6$?

[A] –11   [B] –1   [C] $-\dfrac{1}{6}$ [D] $-\dfrac{11}{6}$

43. Solve: $5x - 3 = 37$

[A] 34   [B] 7   [C] 8   [D] 3

44. Solve: $\dfrac{x}{7} - \dfrac{x}{8} = 2$

[A] 1   [B] 56   [C] $7\dfrac{7}{15}$ [D] 112

45. Solve for s: $-6 = t + 5s$

[A] $s = -6 - t - 5$ [B] $s = \dfrac{-6 - t}{5}$ [C] $s = \dfrac{6 + t}{5}$ [D] $s = -6 - 5t$
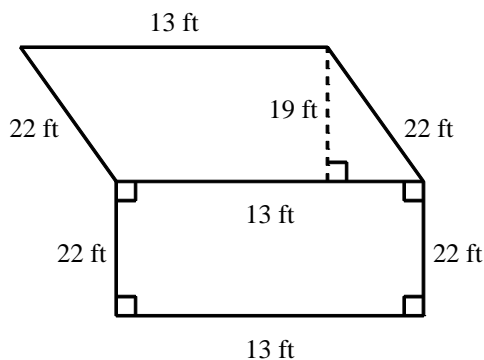
46. One side of a parallelogram has a length of 5.3 yards while another side has a length of 80.7 yards. What is the perimeter of the parallelogram?

[A] 427.71 yd   [B] 172 yd   [C] 91.3 yd   [D] 86 yd

47. Find the circumference of a circle whose radius is 3 inches. (Use $\pi \approx 3.14$)

[A] 9.42 in.   [B] 1.047 in.   [C] 2.093 in.   [D] 18.84 in.
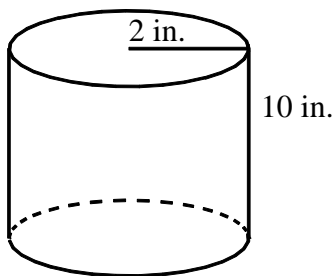
48. Find the area of the region shown.

[A] 114 ft^2 [B] 704 ft^2 [C] 533 ft^2 [D] 572 ft^2

49. Find the volume of a cube 5 inches on each side.

[A] 30 $in.^3$ [B] 15 $in.^3$ [C] 125 $in.^3$ [D] 25 $in.^3$

50. Find the volume of the circular cylinder. (Use $V = \pi r^2 h$; $\pi \approx 3.14$)

[A] 62.8 $in.^2$ [B] 125.6 $in.^3$ [C] 125.6 $in.^2$ [D] 62.8 $in.^3$

[1] [B]

[2] [B]

[3] [D]

[4] [B]

[5] [C]

[6] [B]

[7] [D]

[8] [B]

[9] [A]

[10] [B]

[11] [C]

[12] [C]

[13] [C]

[14] [C]

[15] [A]

[16] [A]

[17] [C]

[18] [A]

[19] [D]

[20] [B]

[21] [B]

[22] [B]

[23] [A]

[24] [B]

[25] [C]

[26] [A]

[27] [B]

[28] [D]

[29] [C]

[30] [A]

[31] [D]

[32] [A]

[33] [B]

[34] [C]

[35] [B]

[36] [B]

[37] [C]

[38] [B]

[39] [A]

[40] [C]

[41] [A]

[42] [C]

[43] [C]

[44] [D]

[45] [B]

[46] [B]

[47] [D]

[48] [C]

[49] [C]

[50] [B]