Name _____

Baseline Test

Math Course 3

1. 520 ÷ 25 equals

A. 20.8 **B.** 28 **C.** 2.08 **D.** 2.8 **E.** None correct

2. 40.6 + 27.84 + 12 equals

A. 32.02 **B.** 68.66 **C.** 80.44 **D.** 70.54 **E.** None correct

3. 3.8 − (2 − 0.18) equals

A. 1.62 **B.** 1.98 **C.** 3.62 **D.** 3.48 **E.** None correct

4. 0.14 × 0.15 equals

A. 0.21 **B.** 0.021 **C.** 0.0021 **D.** 2.1 **E.** None correct

5. 0.14 ÷ 70 equals

A. 500 **B.** 0.02 **C.** 50 **D.** 0.002 **E.** None correct

6. $2\frac{1}{2} + 3\frac{1}{6} + 2\frac{1}{3}$ equals

A. 8 **B.** $7\frac{3}{11}$ **C.** $7\frac{1}{2}$ **D.** $8\frac{1}{12}$ **E.** None correct

7. $5\frac{1}{6} - 3\frac{3}{4}$ equals

A. $2\frac{5}{12}$ **B.** $1\frac{5}{12}$ **C.** $2\frac{7}{12}$ **D.** $8\frac{11}{12}$ **E.** None correct

8. $3\frac{3}{4} \cdot 3\frac{1}{3}$ equals

A. $9\frac{1}{4}$ **B.** 15 **C.** $12\frac{1}{2}$ **D.** $1\frac{1}{8}$ **E.** None correct

9. $5\frac{5}{6} \div 2\frac{1}{2}$ equals

A. $2\frac{1}{3}$ **B.** $2\frac{1}{2}$ **C.** $14\frac{7}{12}$ **D.** $\frac{3}{7}$ **E.** None correct

10. $\frac{24x^2y}{40xy^2}$ reduces to

A. $\frac{3x}{8y}$ **B.** $\frac{3x^2}{5y^3}$ **C.** $\frac{3x}{5y}$ **D.** $\frac{4x}{10xy}$ **E.** None correct

11. Which digit in 50.143 has the same place value as the 7 in 6.8792?

A. 5 **B.** 4 **C.** 1 **D.** 3 **E.** None correct

12. $(8 \times 10^3)(4 \times 10^4)$ equals

A. 3.2×10^7 **B.** 3.2×10^{12}

C. 3.2×10^5 **D.** 3.2×10^8

E. None correct

13. One inch equals 2.54 centimeters. One foot equals how many centimeters?

A. 30.48 cm **B.** 25.4 cm **C.** 21.8 cm **D.** 12 cm **E.** None correct

14. The formula $F = 1.8C + 32$ may be used to convert temperatures in °C (C) to °F (F). 30°C equals

A. 54°F **B.** 22°F **C.** 86°F **D.** -1°F **E.** None correct

15. Which of these is NOT equivalent to 4%?

A. 0.04 **B.** $\frac{4}{100}$ **C.** $\frac{1}{25}$ **D.** $\frac{2}{50}$ **E.** None correct

16. $\frac{2^4 \cdot 2^6}{2^2}$ equals

A. 2^5 **B.** 2^8 **C.** 2^{12} **D.** 2^6 **E.** None correct

17. $\sqrt{5^2 - 3^2}$ equals

A. 16 **B.** 8 **C.** 4 **D.** 2 **E.** None correct

18. Ten and two hundredths may be written as

A. 210 **B.** 10.02 **C.** 0.102 **D.** 10.200 **E.** None correct

19. Estimate the product of $9\frac{5}{8}$ and $11\frac{2}{5}$ by first rounding each mixed number to the nearest whole number.

A. 99 **B.** 108 **C.** 110 **D.** 120 **E.** None correct

20. Which set of numbers is arranged in order from least to greatest?

A. −1, 0, 0.1, 1 **B.** −1, 0.1, 0, 1 **C.** 0.1, −1, 0, 1 **D.** −1, 0, 1, 0.1

21. What number solves this proportion? $\frac{2.4}{m} = \frac{3}{4.5}$

A. 0.36 **B.** 3.6 **C.** 36 **D.** 360 **E.** None correct

22. The team's win-loss ratio was 5 to 3. If the team played 120 games without a tie, how many games did the team win?

A. 75 **B.** 60 **C.** 45 **D.** 80 **E.** None correct

23. The average of Blanca's first three test scores was 90. The average of her next two test scores was 95. What was the average of Blanca's first five test scores?

A. 92 **B.** 92.5 **C.** 93 **D.** 94 **E.** None correct

24. Sam's first six scores were 90, 80, 90, 80, 80, and 100. What is the median of these scores?

A. 80 **B.** 85 **C.** 90 **D.** 95 **E.** None correct

25. One white marble, two blue marbles, and three red marbles were in a bag. One marble was drawn from the bag and then put back. Then another marble was drawn. What is the probability that a white marble was drawn both times?

A. $\frac{1}{9}$ **B.** $\frac{1}{12}$ **C.** $\frac{1}{30}$ **D.** $\frac{1}{36}$ **E.** None correct

26. Dixon deposited $2000.00 in an account that paid 5% interest compounded annually. How much interest will the account earn in two years?

A. $105 **B.** $200 **C.** $205 **D.** $210 **E.** None correct

27. Greg drove 386 miles and used 20 gallons of gas. His car averaged how many miles per gallon?

A. 19.6 mpg **B.** 19.3 mpg **C.** 193 mpg **D.** 77 mpg **E.** None correct

28. At a 25%-off sale, a shirt cost $36.00. What was the regular price of the shirt?

A. $45.00 **B.** $27.00 **C.** $48.00 **D.** $52.00 **E.** None correct

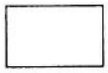
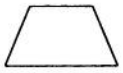
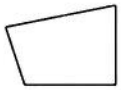
29. Janice correctly answered 21 of the 24 questions. What percent of the questions did she answer correctly?

A. $87\frac{1}{2}\%$ **B.** 84% **C.** 90% **D.** 78% **E.** None correct

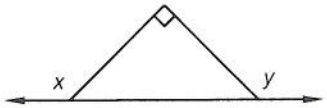
30. Jaime ran the first 2000 meters in 6 minutes. At that rate, how long would it take Jaime to run 5000 meters?

A. 9 min **B.** 12 min **C.** 15 min **D.** 30 min **E.** None correct

31. Which of these quadrilaterals appears to be a trapezoid?

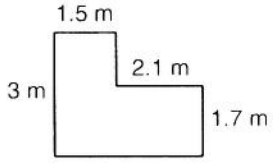
A.  **B.**  **C.**  **D.**  **E.** None correct

32. If $\angle x$ measures 140°, then what is the measure of $\angle y$?



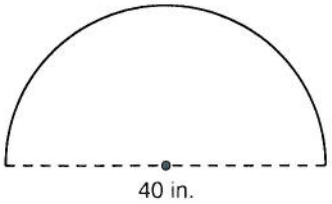
A. 140° **B.** 40° **C.** 50° **D.** 130° **E.** None correct

33. What is the perimeter of this figure? All angles are right angles.



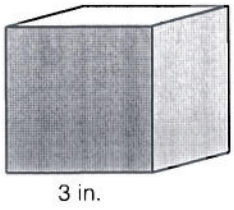
A. 13.2 m **B.** 8.3 m **C.** 11.9 m **D.** 15 m **E.** None correct

34. An arch in the form of a semicircle was over a 40-inch-wide doorway. Find the length of the arch to the nearest inch.



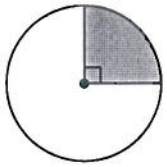
A. 120 in. **B.** 100 in. **C.** 63 in. **D.** 48 in. **E.** None correct

35. What is the total surface area of this cube?



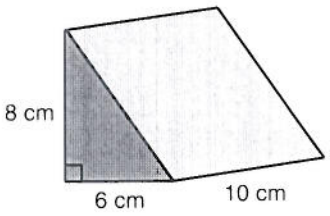
A. 9 in.^{2} **B.** 27 in.^{2} **C.** 54 in.^{2} **D.** 81 in.^{2} **E.** None correct

36. The diameter of a circle is 12 in. What is the area of a 90° sector of the circle? Use 3.14 for π.



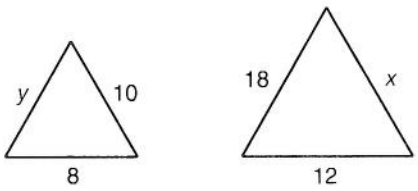
A. 9.42 in.^{2} **B.** 28.26 in.^{2} **C.** 56.52 in.^{2} **D.** 113.04 in.^{2} **E.** None correct

37. What is the volume of this triangular prism?



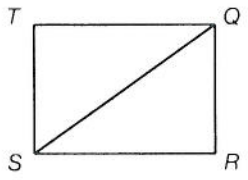
A. 480 cm^3 **B.** 240 cm^3 **C.** 288 cm^3 **D.** 24 cm^3 **E.** None correct

38. These two triangles are similar. Find x.



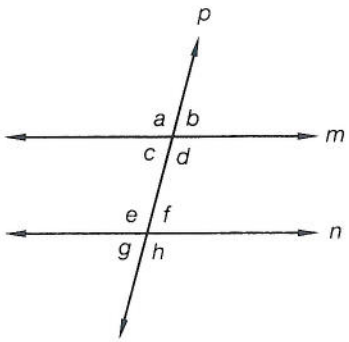
A. 15 **B.** 12 **C.** 9 **D.** 6 **E.** None correct

39. In rectangle $QRST$, QR is 30 mm and RS is 40 mm. How long is segment QS?



A. 45 mm **B.** 50 mm **C.** 60 mm **D.** 70 mm **E.** None correct

40. In this figure, line m is parallel to line n and the measure of $\angle a = 105°$. What is the measure of $\angle g$?



A. 105° **B.** 85° **C.** 75° **D.** 120° **E.** None correct

41. $(-6) - (-7)(-4)$ equals

A. −52 **B.** −34 **C.** 34 **D.** −4 **E.** None correct

42. If $a = 3$, $b = 4$, and $c = -2$, then $b^2 - 4ac$ equals

A. 40 **B.** −8 **C.** 2 **D.** 8 **E.** None correct

43. $(-2)^3 - (-2)^2$ equals

A. −32 **B.** 4 **C.** −4 **D.** −12 **E.** None correct

44. Which choice shows the prime factorization of 500?

A. $5 \cdot 10^2$ **B.** $5^2 \cdot 2^3$ **C.** $2^2 \cdot 5^3$ **D.** $25 \cdot 20$ **E.** None correct

45. $3(x - 3)$ equals

A. $3x - 9$ **B.** $3x + 9$ **C.** $3x - 6$ **D.** $x - 9$ **E.** None correct

46. If $3.6n - 0.18 = 7.02$, then n equals

A. 0.2 **B.** 2 **C.** 1.9 **D.** 0.19 **E.** None correct

47. "Six less than twice a number" may be expressed as

A. $6 - 2x$ **B.** $2(x - 6)$ **C.** $2x - 6$ **D.** $x(2 - 6)$ **E.** None correct

48. $\frac{(2xy)(4x^2y)}{8x^2y}$ equals

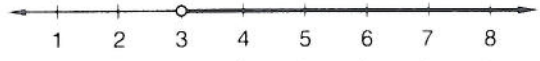
A. xy^2 **B.** $1x$ **C.** x^3 **D.** xy **E.** None correct

49. Which number line shows the solution of $2x - 1 < 5$?

A.

B.

C.



D.

50. This line represents what equation?

A. $y = x + 2$

B. $y = 2x - 1$

C. $y = 2x + 2$

D. $y = -2x + 2$

E. None correct