

2003 FRANKLIN MATH BOWL
Sixth Grade Exam

INSTRUCTIONS: Choose the *single best* solution for each problem.

1. Solve for r .

$$r = 0.032 \times 20.02$$

- a. $r = 640.64$ b. $r = 0.64064$ c. $r = 64064$ d. $r = 64.064$

2. Mr. Carter wants to fertilize his yard. Each bag of fertilizer is supposed to cover 75 square feet of ground. Mr. Carter's front yard is 144 square feet and his backyard is 200 square feet. How many bags of fertilizer will Mr. Carter need to buy (assuming he doesn't already have some on hand)?

- a. 3 bags b. 6 bags c. 5 bags d. 4 bags

3. Which one of the options listed below is equivalent to the following?

$$5 \times 10^6$$

- a. 5,000,000 b. 300 c. 56 d. 0.000005

4. A sports arena has 15,000 seats. About two-thirds of the seats are sold for each event. If tickets cost \$25 per seat, approximately how much money would the arena collect for a season with 10 sporting events?

- a. \$3,750,000 b. \$2,500,000 c. \$1,250,000 d. \$7,500,000

5. Find the correct amount.

$$25\% \text{ of } 2040$$

- a. 51,000 b. 81.6 c. 510 d. 8160

11. Find the correct amount.

$$\frac{2}{5} \text{ of } 40$$

- a. 16 b. 100 c. 10 d. 8

12. A square pasture has an area of 1296 square meters. What is the length of one side of the pasture?

- a. 324 m b. 36 m c. 648 m d. 81 m

13. Solve for y .

$$1\frac{3}{4} \div \frac{7}{8} = y$$

- a. $y = \frac{7}{8}$ b. $y = 2$ c. $y = 2\frac{5}{8}$ d. $y = 1\frac{17}{32}$

14. Dr. Williams is planning to buy new carpeting for her office. The office is 4 meters wide and 8 meters long. The carpeting she likes best is available in a 4-meter width and costs \$109.95 per square meter. How much will it cost Dr. Williams to purchase (not including sales tax) enough of this carpeting to cover her office floor?

- a. \$879.60 b. \$3078.60 c. \$1319.40 d. \$3518.40

15. Solve for x .

$$8^5 \div 8^3 = x$$

- a. $x = 8^{15}$ b. $x = 8^8$ c. $x = 8^2$ d. $x = 8^{53}$

16. Find the mean, median, and mode, respectively, for the following set of data.

11 6 13 12 8 12 12 10 6

- a. 10, 12, 11 b. 11, 10, 12 c. 12, 11, 10 d. 10, 11, 12

17. Solve for m .

$$1\frac{3}{5} + 3\frac{1}{3} + \frac{2}{15} = m$$

- a. $m = \frac{64}{15}$ b. $m = \frac{681}{225}$ c. $m = \frac{76}{15}$ d. $m = \frac{98}{23}$

18. What is the closest integer to the right of $-5\frac{2}{3}$ on a number line?

- a. -5 b. 6 c. 5 d. -6

19. What is the difference between the sum of 0.6 and 0.4 and the product of 0.6 and 0.4?

- a. 0.76 b. 0.04 c. 0.16 d. 0.24

20. There are six cards that spell out C H A N C E. Suppose you choose one card at random. What is the probability that you do not draw a vowel?

- a. $\frac{1}{3}$ b. $\frac{1}{2}$ c. $\frac{3}{5}$ d. $\frac{2}{3}$

21. Solve for w.

$$\frac{86}{w} = \frac{43}{24}$$

- a. $w = 0.02$ b. $w = 12$ c. $w = 48$ d. $w = 0.08$

22. The first three prime numbers are 2, 3, and 5 with a product of 30. What is the product of the next 3 prime numbers?

- a. 378 b. 1001 c. 693 d. 1309

23. A point is located on the line $6x - 3y = 12$. If the first coordinate of this point is 4, what is the second coordinate?

- a. 8 b. 6 c. 4 d. 2

24. Which of the following is not a factor of 1360?

- a. 2 b. 3 c. 4 d. 5

25. Grapes are on sale for \$1.75 per pound at the grocery store. You pick a bag of grapes that weighs 36 ounces. What is the price (before tax) of this bag of grapes?

- a. \$6.30 b. \$3.94 c. \$5.25 d. \$3.49