

Franklin Math Bowl

Seventh Grade Test 2010



1. You are making a recipe that calls for 0.4 L of milk. Your measuring cup is marked in milliliters. How many milliliters do you need?
(A) 4 (B) 40 (C) 400 (D) 4000
2. What is the sum of the smallest prime number greater than 92 and the smallest prime number greater than 42?
(A) 136 (B) 134 (C) 144 (D) 140
3. What digit is in the ten thousandths place of the decimal for $\frac{5}{7} + \frac{1}{6} + \frac{3}{8}$?
(A) 5 (B) 2 (C) 9 (D) 3
4. Shanita's allowance went up by 50% to \$12 a week. What was her original weekly allowance?
(A) \$9 (B) \$6 (C) \$8 (D) \$24
5. 25% of the total weight of a two-pound apple pie is crust. How much additional apple filling has to be added so that the crust is 23% of the weight?
(A) 2 lb (B) $\frac{1}{23}$ lb (C) $\frac{4}{23}$ lb (D) $\frac{23}{25}$ lb
6. A bolt of fabric is 40 yards long. How many inches long is it?
(A) 120 (B) 480 (C) 4320 (D) 1440
7. How many pieces of rope $\frac{1}{6}$ yd long can be cut from a rope that is $3\frac{1}{2}$ yd long?
(A) 7 (B) 12 (C) 10 (D) 21
8. Find the greatest common factor of 240 and 320 and 560.
(A) 20 (B) 40 (C) 6720 (D) 80
9. What is the ratio of the length of one side of an equilateral triangle to its perimeter?
(A) 1:2 (B) 1:3 (C) 3:1 (D) 1:1
10. Find the difference between $\frac{3}{8}$ and its reciprocal.
(A) $\frac{55}{24}$ (B) $\frac{3}{4}$ (C) $\frac{7}{24}$ (D) $\frac{9}{64}$
11. The area of a square room is 324 sq ft. What is its perimeter?
(A) 162 ft (B) 81 ft (C) 1296 ft (D) 72 ft

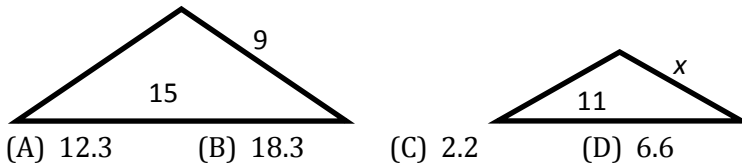
12. The measure of each interior angle of a regular octagon is
(A) 240° (B) 1080° (C) 135° (D) dependent on the lengths of the sides

13. A number n is subtracted from 15. The result is 7 more than n . What is n ?
(A) 22 (B) -22 (C) 11 (D) 4

14. Find the additive inverse of $\frac{5}{8} + \frac{12}{5} \div \frac{8}{15}$.
(A) $\frac{-131}{200}$ (B) $\frac{8}{41}$ (C) $\frac{41}{8}$ (D) $-\frac{41}{8}$

15. What fraction in lowest terms is the same as $62\frac{3}{8}\%$?
(A) $\frac{499}{8}$ (B) $\frac{8}{499}$ (C) $\frac{199}{200}$ (D) $\frac{499}{800}$

16. These two triangles are similar. What is the value of x , rounded to the nearest tenth?



17–18. A class recorded the number of CDs each student owned. Here are some of the data:

46	98	128	123	230	168	227	125	86	248	211	236	199	242
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17. What is the median number of CDs owned by class members?
(A) 169.1 (B) 183.5 (C) 176 (D) 147

18. What is the interquartile range for CDs owned by the students?
(A) 107 (B) 202 (C) 88 (D) 117

19. A full bottle of Caramel Soda weighs 30 oz. A half-full bottle weighs 18 oz. How much does the bottle weigh?
(A) 12 oz. (B) 15 oz. (C) 3 oz. (D) 6 oz.

20. A store drops the price of an item by 10% each day for three days. What is the percent off on the *second* day compared to the original price?
(A) 20% (B) 19% (C) 30% (D) 27.1%

21. How many 3 inch by 4 inch tickets can be cut from a sheet of paper measuring 3 feet by 4 feet?
(A) 12 (B) 192 (C) 1728 (D) 144

22. Five boys and seven girls are in a room. Each person shakes hands with each of the other people exactly once. How many handshakes are there?
(A) 66 (B) 132 (C) 144 (D) 24
23. Find the sum of the largest prime factor 462, the largest prime factor of 195, and the largest prime factor of 306.
(A) 69 (B) 7 (C) 41 (D) 2431
24. A box in the shape of a cube 4 inches on each side is filled completely with water. The water is then poured into a cubical box 8 inches on each side. How many inches high is the water in the larger box?
(A) 4 (B) 2 (C) 8 (D) 1

Question 25 may be used as a tie breaker. Be sure to show your work in the answer space provided on your answer sheet.

25. If $15 - \sqrt{x} = 6.7$, what is the value of $13 + \sqrt{x}$?
(A) 34.7 (B) 14.4 (C) 21.3 (D) 15.9