

1) If $A \Delta B = 5B^2 + A \times B$, find $-3 \Delta -4$.

- a) 92 b) -92 c) 308 d) -308 e) NH

2) Find the circumference of a circle if the radius is 12.

- a) 75.32 b) 37.68 c) 452.16 d) 75.36 e) NH

3) $9! 10!$

$7!8!$

- a) 6481 b) 6480 c) 648 d) 6084 e) NH

4) Find b: $5^2 + 2b - 15 = 120$

- a) 55 b) 51 c) 53 d) 54 e) NH

5) Find the length of the model boat if the scale is 4 in : 2 ft and the actual boat measures 22 ft long.

- a) 44 feet b) 44 inches c) 88 feet d) 88 inches e) NH

6) A bag contains 17 red gumballs, 13 yellow gumballs, 19 blue gumballs, and 1 green gumball. What is the probability of drawing a green gumball?

- a) 1% b) 1 c) 2% d) 2 e) NH

7) If $a = \frac{3}{4}$ and $b = \frac{5}{6}$, find $a + b$.

- a) $1\frac{7}{12}$ b) $\frac{4}{5}$ c) $\frac{1}{12}$ d) $1\frac{1}{2}$ e) NH

8) $23 - 8\frac{3}{4}$

- a) $16\frac{3}{4}$ b) $16\frac{1}{4}$ c) $15\frac{3}{4}$ d) $15\frac{1}{4}$ e) NH

9) $24.62 + 101.305 + 9.7 =$

- a) 135.625 b) 131.7505 c) 103.864 d) 135.67 e) NH

10) Find the area of a circle if the diameter is 11 feet. Round to the nearest tenth.

- a) 34.5 ft^2 b) 35 ft^2 c) 94.9 ft^2 d) 95.0 ft^2 e) NH

11) What is the area of a square with a perimeter of 66 inches?

- a) 256.25 in^2 b) 120.75 in^2 c) 272.24 in^2 d) 123.75 in^2 e) NH

12) Express $\frac{8}{29}$ as a decimal. Round to the nearest thousandth.

- a) 0.27 b) 0.28 c) 0.275 d) 0.276 e) NH

13) If $4x = 18$ and $8z = 35$, what is the sum of x and z ?

- a) 8.75 b) 8.125 c) 8.875 d) 8.975 e) NH

14) How many ways can the letters in the word HAWAII be arranged?

- a) 108 b) 720 c) 180 d) 360 e) NH

15) Find the area of a triangle: height= 8.75 ft, base= 6.2 ft. (Round to the nearest tenth.)

- a) 27.2 ft^2 b) 27.125 ft^2 c) 26.2 ft^2 d) 26.125 ft^2 e) NH

16) A car travels 162 miles in 2 hours. At this rate, how many miles will it travel in 3.5 hours?

- a) 567 miles b) 283.5 miles c) 287 miles d) 574 miles e) NH

17) Amie is making apple cobbler for the family reunion. The recipe requires 800 grams of apples per cobbler. If Amie has 4.8 kilograms of apples, how many cobblers can she make?

- a) 5 cobblers b) 6 cobblers c) 7 cobblers d) 8 cobblers e) NH

- 18) Find the sum of the mean, median, and mode of the following set of data: 65, 53, 57, 75, 76, 66, 64, 75, 63
- a) 203 b) 204 c) 205 d) 206 e) NH
- 19) Which of the following numbers is divisible by 4 (with no remainder)?
- a) 4,681,952 b) 9,641,742 c) 9,921,450 d) 577,079 e) NH
- 20) Five-eighths of the students are going on the field trip. Express this fraction as a percent.
- a) 62% b) 62.5% c) 63% d) 63.5% e) NH
- 21) Anne won \$800,000 in a regional lottery. After paying \$250,000 in taxes, she invested the remaining money in a savings account at 3.75% simple interest. How much money will be in the account if Anne makes no deposits or withdrawals for 3 years?
- a) \$611,873 b) \$611,874 c) \$611,875 d) \$611,876 e) NH
- 22) A mountain bike costs \$635 at regular price. If the bike is on sale with a 35% discount, what would be the total cost of the bike be, including sales tax? (Use 9% sales tax)
- a) \$449.90 b) \$449.98 c) \$448.90 d) \$448.98 e) NH
- 23) Solve: $\frac{2.5}{4.5} = \frac{7.5}{x}$
- a) 12.25 b) 12.5 c) 13.25 d) 13.5 e) NH
- 24) Building A measures 30 feet 6 inches tall. Building B measures 28 feet 1 inch tall. How tall must Building C be for all the three buildings to measure a total of 80 feet?
- a) 21 ft. 7in. b) 21 ft. 5 in. c) 22 ft. 5 in. d) 22 ft. 7 in. e) NH
- 25) What is the product of the greatest common factor of 27 and 108 and the least common multiple of 9 and 15?
- a) 405 b) 1,215 c) 2,430 d) 3,645 e) NH

Tie Breakers

- 1) Brett's restaurant bill comes to \$25.40. He is planning to tip the waitress 15% of his bill. How much money should he leave for a tip?
- 2) Gwyneth spent \$14, or 35% of her money, on a new blouse. How much money did she have to start with?
- 3) A tunnel measures 8,448 feet long. How many yards is this?