Level 1: 7th Grade Huddle - 2019

Note: "N.O.T." means "none of these"

(1) If a single six-sided die is rolled three times in a row, what is the probability that the die landed on the same side all three times?

(a) 1/216 (b) 1/18 (c) 1/36 (d) 1/6 (e) N.O.T

(2) What is the value of $-\frac{5}{30}-\frac{13}{27}$?

(a) $-\frac{35}{54}$ (b) $-\frac{83}{135}$ (c) $-\frac{18}{3}$ (d) $\frac{18}{57}$ (e) N.O.T.

(3) Translate into an equation: "Half the sum of a number and 12 is five less than the number."

(a) $\frac{1}{2}x+12=x-5$ (b) $\frac{1}{2}x+12=5-x$ (c) $\frac{1}{2}(x+12)=x-5$

(b) (d) $\frac{1}{2}(x+12)=5-x$ (e) N.O.T.

(4) When flipping a coin twice, which is more likely?

(a) One flip heads, one flip tails
(b) Both flips heads
(c) Both flips tails
(d) All outcomes in (a),(b),(c) equally likely
(e) N.O.T.

(5) If the load on a truck weighs a ton, and the load is evenly disbursed onto 150 boxes, how much would be the weight of each box?

(a) $\frac{20}{3}\ lbs$ (b) $\frac{40}{3}\ lbs$ (c) $\frac{16}{5}\ lbs$ (d) $\frac{36}{5}\ lbs$ (e) N.O.T.

(6) What is the volume, in cubic inches, of a right circular cylinder whose radius is 4 inches and height is 6 inches?

(a) 16π (b) 96π (c) 24π (d) 144π (e) N.O.T.

(7) Two different numbers between 1 and 10 (inclusive) are chosen at random. Which of the following has the highest probability?

(a) Getting two odd numbers
(b) The first number being an odd number
(c) The sum of the two numbers is odd
(d) All of the above have the same probability
(e) N.O.T.

(8) How many units apart are $-\frac{3}{5}$ and $-\frac{7}{12}$ on the number line?

(a) $\frac{7}{60}$ (b) $\frac{1}{30}$ (c) $\frac{11}{30}$ (d) $\frac{1}{60}$ (e) N.O.T.

(9) What is the value of $36 \div \left(-\frac{9}{4}\right)$?

(a) -1 (b) 36 (c) -16 (d) 16 (e) N.O.T.

(10) Which of the following would be expected to have a greater variation in a sample of 100 randomly selected adults?

(a) The weights of those selected (in pounds)
(b) The weights of those selected (in ounces)
(c) The heights of those selected (in inches)
(d) The ring sizes of those selected
(e) N.O.T.

(11) If little Jimmy eats 2/5 of a candy bar, then eats 1/3 of what's left, what fraction of the candy bar remains uneaten?

(a) 1/5 (b) 2/5 (c) 2/15 (d) 4/15 (e) N.O.T.

(12) When a teacher tells their student that their exam average is an 84%, the "average" refers to which of the following?

(a) The mean of all the exam scores
(b) The median of all the exam scores
(c) The mode of all the exam scores
(d) The standard deviation of all the exam scores
(e) N. O.T.

(13) What is the decimal equivalent of 48/9?

(a) 5.3
(b) 5.3333333
(c) 5.3333333....
(d) 5
(e) N.O.T.

(14) Find the median of the following list of numbers: 4, 7, 8, 1, 3, 1, 9, 7, 2, 2, 6

(a) 7
(b) 5
(c) 4
(d) 4.5
(e) N.O.T.

(15) What does the length of one side of a square need to be in order for its area to be more than four times its perimeter, if the length of the side must be a whole number?

(a) 8
(b) 5
(c) 3
(d) 4
(e) N.O.T.

(16)A circle has diameter 4 inches. What will the area be if the diameter is tripled?

(a) 36π (b) 16π (c) 144π (d) 12π (e) N.O.T.

(17) Simplify: $\dfrac{\frac{4}{5} \div \frac{8}{15}}{\frac{7}{15} - \frac{1}{6}}$

(a) $\frac{6}{7}$ (b) -3 (c) $-\frac{2}{15}$ (d) 5 (e) N.O.T.

(18) How many different triangles can be drawn that contain both an 85 degree angle and a 58 degree angle?

(a) 0 (b) 1 (c) 2 (d) 3 (e) N.O.T.

(19) Let C be the cost of a house. If 0.85C is the amount of the mortgage after the down-payment, what percent down-payment was made?

(a) 8.5% (b) 85% (c) 15% (d) 1.5% (e) N.O.T.

(20) If a person's shoe size is proportional to their height and a person who is 60 inches tall has a shoe size of 8, how tall would a person who wears a size 10 shoe be?

(a) 75 inches tall (b) 70 inches tall (c) 80 inches tall (d) 85 inches tall (e) N.O.T.

(21) Jim drove 342 miles in 5 hours at a constant rate of speed. If he continues at this speed, how far can he drive in 13 hours?

(a) 1026 miles (b) 1026.8 miles (c) 889 miles (d) 889.2 miles (e) N.O.T.

(22) If y is proportional to x and the graph of y versus x goes through the point (9, 12), which other point does the graph go through?

(a) (3, 4) (b) (1, 1) (c) (5, 6) (d) (18, 30) (e) N.O.T.

(23) The base of a triangle is 16 inches long. What would the triangle's height need to be, at a minimum, in order for the area of the triangle to be at least 45 square inches, if the height must be a whole number?

(a) 4 inches (b) 5 inches (c) 6 inches (d) 7 inches (e) N. O. T.

(24) A wedding photographer charges $1050 per day, plus $250 for every hour spent photographing the wedding. How many hours will the photographer spend photographing a wedding if the couple has budgeted $2800 for the wedding?

(a) 6 hours (b) 7 hours (c) 8 hours (d) 9 hours (e) N.O.T.

(25) What is the area of a circle with circumference 12π ?

(a) 36π (b) 24π (c) 144π (d) 48π (e) N.O.T.

(26) Stella makes $25,000 a year and currently pays no taxes. If she receives an annual raise of 7%, she will now be taxed at a rate of 3% annually. In this case, what would her annual salary be?

(a) $26,000 (b) $26,750 (c) $27,552.50 (d) $25,947.50 (e) N.O.T.

(27) Two angles are complimentary. If the first angle measures 62 degrees, what is the measure of the second angle?

(a) 118 degrees (b) 28 degrees (c) 298 degrees (d) 38 degrees (e) N.O.T.

(28) Find the value of $\frac{3}{4}+\frac{11}{12}$.

(a) $\frac{23}{12}$ (b) $\frac{5}{3}$ (c) $\frac{10}{9}$ (d) $\frac{4}{3}$ (e) N.O.T.

(29) When flipping a coin three times in a row, which of the following has the smallest probability?

(a) Getting all three landing on Tails
(b) Getting at least two to land on Heads
(c) Getting exactly two Heads and One Tail
(d) Getting a Heads on the FIRST flip
(e) N.O.T.

(30) Simplify: $8+\frac{2}{7}$

(a) $\frac{10}{7}$ (b) $\frac{8}{7}$ (c) 9 (d) $\frac{58}{7}$ (e) N.O.T.