Dick Schaff Math Superbowl XLIV
Level 1: 7th Grade Huddle

Directions: (1) Select the most correct answer for each question and bubble it in on your Scantron form.
(2) No calculating devices of any sort are allowed.
(3) N.O.T. stands for "None of these.

1. Two fair coins are flipped at the same time. What is the probability they both show Tails?

a) ¼ b) ½ c) ¾ d) 1 e) N.O.T.

2. A fair six-sided die is rolled. What is the probability that the result is a 5 or a 6?

a) ¼ b) ½ c) ¾ d) 1 e) N.O.T.

3. Two fair six-sided dice are rolled, and their results are added together. Which of the following results has the greatest probability?

a) 5 b) 6 c) 7 d) 8 e) N.O.T.

4. A single card is drawn from a fair deck of playing cards (with no jokers). What is the probability this card is a Jack or a Diamond?

a) 1/52 b) 1/13 c) 4/13 d) 17/52 e) N.O.T.

5. A single card is drawn from a fair deck of playing cards (with no jokers). What is the probability this card is a Jack and a Diamond?

a) 1/52 b) 1/13 c) 4/13 d) 17/52 e) N.O.T.

6. The perimeter of a rectangle is 20 cm, and the width is 4 cm. What is the area of this rectangle?

a) 6 cm b) 12 cm c) 24 cm d) 80 cm^2 e) N.O.T.

7. The end of a triangular prism has a surface area of 12 cm^2, and the prism is 20 cm long. What is the volume of this prism?

a) 32 cm^3 b) 120 cm^3 c) 240 cm^3 d) 2880 cm^3 e) N.O.T.

8. A rectangular solid is 3 m long, 2 m wide, and 1 m high. What is the surface area of this solid?

a) 6 m^3 b) 11 m^2 c) 18 m^2 d) 22 m^2 e) N.O.T

9. A square has a perimeter of 16 yards. What is the area of the square?

a) 4 yards b) 8 yards c) 16 square yards d) 156 square yards e) N.O.T.

10. A circle has an area of 25π cm^2. What is the diameter of this circle?

a) 5 cm b) 5π cm c) 10 cm d) 10π cm e) N.O.T.

11. Alex can ride a bike 8 miles in 48 minutes. How far can Alex ride in two hours?

a) 10 miles b) 20 miles c) 30 miles d) 40 miles e) N.O.T.

12. Bobby can paint 1½ rooms in one day. How many rooms can Bobby paint in 2½ days?

a) 3¾ b) 4 c) 4½ d) 5 e) N.O.T.

13. Chris is five feet tall. One day Chris casts a shadow 7½ feet long. A the same time a nearby tree casts a shadow 22½ feet long. How tall is the tree?

a) 7½ feet b) 10 feet c) 20 feet d) 45 feet e) N.O.T.

14. Angle A has a measure of 37°. Angle B has a measure of 67°. Which of the following must be true?

a) Angles A and B are complementary.
b) Angles A and B are supplementary.
c) Angles A and B are vertical angles.
d) Angles A and B are alternate interior angles.
e) N.O.T.

15. Angle A has a measure of 77°. Angle B has a measure of 103°. Which of the following must be true?

a) Angles A and B are complementary.
b) Angles A and B are supplementary.
c) Angles A and B are vertical angles.
d) Angles A and B are alternate interior angles.
e) N.O.T.

16. A comic book used to cost $4. Now it costs $5. What is the percent of increase in the price?

a) 1% b) 20% c) 25% d) 100% e) N.O.T.

17. Alex has a membership card for a retail store, and gets a 5% discount on a $100 television. A 5% sales tax is then added to the new price of the television. How much does Alex actually pay?

a) $95.00 b) $99.75 c) $100.00 d) $105.00 e) N.O.T.

18. A $40 video game is on sale for $5 off. What is the percent of discount?

a) 5% b) 12.5% c) 35% d) 87.5% e) N.O.T.

19. Bobby eats 1/6 of a pie. Then Chris eats 1/4 of the pie. Then Dale eats 1/4 of what is left. How much of the pie remains?

a) 7/48 b) 1/3 c) 7/16 d) 2/3 e) N.O.T.

20. A pizza is cut into a number of equally-sized pieces. Erin eats one piece of pizza. Francis eats two pieces of pizza. 75% of the pizza is left. How many pieces was the pizza originally cut into?

a) 4 b) 8 c) 12 d) 16 e) N.O.T.

21. Which of the following can NOT be the lengths of the three sides of a right triangle?

a) 3 cm, 4 cm, 5 cm
b) 5 cm, 12 cm, 13 cm
c) 6 cm, 8 cm, 10 cm
d) 7 cm, 24 cm, 25 cm
e) N.O.T.

22. What is the result when you divide 25 by 0.04?

a) 0.0625 b) 6.25 c) 62.5 d) 625 e) N.O.T.

23. What is the result when you divide 4¼ by 2½?

a) 17/20 b) 17/10 c) 2 d) 17/5 e) N.O.T.

24. What do you get when you completely simplify $(5-8)(4-7)$?

a) -9 b) -6 c) 6 d) 9 e) N.O.T.

25. It takes 2.3 lbs of potting soil to fill a flowerpot. You have two 20-lb bags of potting soil. What is the maximum number of flowerpots can you fill?

a) 8 b) 9 c) 16 d) 18 e) N.O.T.

26. A wall is three feet wide and seven feet tall. This wall must be completely covered with unbroken tiles that are squares nine inches on a side. What is the smallest number of whole tiles will it take to do this?

a) 21 b) 27 c) 36 d) 40 e) N.O.T.

27. Translate the following statement into symbols: "Half of the difference of twice a number and five."

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

28. Completely simplify this statement: "Six minus four times the difference of eight and negative two."

a) -34 b) -28 c) -24 d) -18 e) N.O.T.

29. Simplify $60 \div 15 \times 4 \div 2$

a) 0.5 b) 1 c) 2 d) 4 e) N.O.T.

30. What is the decimal equivalent of $\frac{30}{11}$?

a) $2\frac{8}{11}$ b) 2.7 c) 2.73 d) $2.\overline{72}$ e) N.O.T.