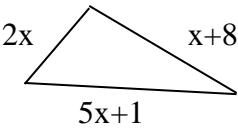NOTE: Choice *e. None of These* is an option for each question.

1. Corinne has a collection of stuffed penguins and red pandas. Her collection of 37 animals has a total of 104 legs. How many of her animals are penguins?
a. 22   b. 26   c. 11   d. 18

2. Conner and Reagan went to Subway for lunch. They had a choice of wheat, rye, sourdough or Italian breads. They could choose ham, turkey, beef or chicken, and could combine that choice with Swiss, cheddar or American cheese. How many more choices did Conner have (bread, meat and cheese) than Reagan (just bread and meat)?
a. 20   b. 32   c. 12   d. 40

3. Hershey's Chocolate Factory produces 10,000,000 Kisses in $1^1/_3$ minutes. About 90 Kisses go in a 1-lb. bag for sale. About how many 1-lb. bags of Kisses will it produce in 40 hours of work?
a. 19.2 million bags   b. 200 million bags   c. 19.2 trillion bags   d. 2 trillion bags

4.   Levi has scored 86, 79, 98 and 87 on 4 tests. What score is needed on the next test to have a 90 average?
a. 98   b. 90   c. 95   d.   100

5. Berry Middle School is going to the Alabama Theater. 1220 students are going. One adult for every 10 students is also going. They are using school buses that seat 45 people. How many buses does Dr. Robins need to order?
a. 30 buses   b. 31 buses   c. 29 buses   d. 28 buses

6. Yousseff had 150 Pokemon cards. He gave Advaith half of them. Then he gave Nazia 1/3 of what remained. He lost 2 cards. How many cards did he have left?
a. 24   b. 56   c. 30   d. 48

7.   For the triangle as shown, if x < 3 and an integer, which could be its perimeter?

2x   x+8

5x+1

a. 33 units   b. 51 units   c. 9 units   d. 25 units

8.   How many distinct arrangements of DOCTORWHO are there?
a. 362880   b. 120960   c. 181440   d. 60480

9. What is the difference between the median and the mode in the following data set?
        1, 2, 22, 2, 2, 16, 2, 10, 18, 15
a. 6   b. 7   c. 4   d. 9

10. Old MacDuncan has a farm with chickens, rabbits and hogs. One day he counted 20 chickens, 5 rabbits, and 10 hogs. If he considered the number of legs on these animals, what percent of them would belong to the chickens?

a. 50   b. 40   c. $33^1/_3$ d. 25

11. Grayson bought 4 pencils and 3 pens for $3.80 while Benjamin bought 2 pencils and 3 pens for $2.80. What is the price of each pencil and each pen?

a. $1.20 per pencil,   b. $ .50 per pencil,   c. $ .12 per pencil,   d. $ .50 per pencil,
     $ .60 per pen $1.20 per pen $1.20 per pen $ .60 per pen

12. A square has the same perimeter as the given triangle. What is the area of the square?

9.7   6.1   8.2
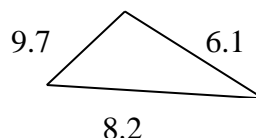
a. 24 units   b. 24 units^2 c. 576 units^2 d. 36 units^2

13. Which is the equation of the y-axis?

a. $y = x$ b. $y = 0$ c. $x = 0$ d. $x = -y$

14. Write $(0.3\overline{6})(0.\overline{27})$ as a fraction in simplest terms.

a. $\dfrac{3}{50}$ b. $\dfrac{1}{10}$ c. $\dfrac{1}{15}$ d. $\dfrac{1}{9}$

15. What base-3 number would you need to add to 1201_3 in order to have a sum of 11220_3?

a. 2012   b. 10220   c. 10012   d. 2102

16. Sijing's and Amaan's families are planning a summer trip. According to their map, they will be traveling 6.75 inches. Which is the best choice for the scale of the map if they are traveling just under 300 miles?

a. 1 in = 55 miles   b. ¼ in = 11 miles   c. ¼ in = 44 miles   d. 1 in = 35 miles

17. $1011_2 + 1101_2 + 1111_2 + 1001_2 = \underline{\ ?\ }_4$

a. 110000   b. 300   c. 101000   d. 323
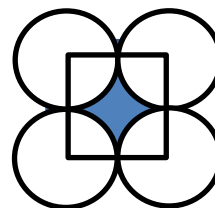
18. Kaitlyn has invested $12,200 at 2.5% per year. How much will her investment earn her in Jan.- Mar. of this year?

a. $305   b. $30.50   c. $76.25   d. $762.50

19. If $\dfrac{x}{y} = \dfrac{3}{4}$, $\dfrac{z}{w} = \dfrac{5}{8}$, and $\dfrac{y}{z} = \dfrac{2}{3}$, then find $\dfrac{x}{w}$ in lowest terms.

a. $\dfrac{15}{48}$ b. $\dfrac{48}{65}$ c. $\dfrac{5}{16}$ d. $\dfrac{9}{32}$

20. The square shown has the centers of 4 congruent circles as its vertices. If the radius measure is 2, what is the shaded area?

a. 12   b. 4π c. $16 - 4\pi$ d. 12π

21. Solve: $(3 - (-7))(4 \bullet -7 + 6)$
a. –40   b. –220   c. 16   d. 88

22. If 10 mathletes can solve 4 problems in 3 minutes, how long will it take 25 mathletes to solve 5 problems?
a. 2.5 minutes   b. 5 minutes   c. 1.5 minutes   d. 3 minutes

23. Bacteria in a petri dish double the area they cover every day. If the dish is completely covered by the end of 16 days, on what day was only one quarter of the dish covered?
a. Day 4   b. Day 8   c. Day 12   d. Day 14

24. Sarah's birthday is Jan. 21; Peter's is Mar. 19. These dates can be written as 3-digit numbers 121 and 319. Find the sum of their LCM and GCF.
a. 3539   b. 440   c. 3509   d. 3630

25. The lengths of two sides of a scalene triangle are 8 in and 6 in. The length of the third side is also an integer. How many possible lengths can the third side have?
a. 9   b. 8   c. 11   c. 13

TieBreaker1: Find the value of x: $\sqrt{\sqrt{\sqrt{x}}} = 2$

TieBreaker 2: Find the sum of twenty consecutive integers beginning with 20.

TieBreaker 3: Solve for x: $\dfrac{(x-1)\sqrt{144}}{8} = 18$