

**Note: "e. None of these" is a choice for every question, in case the answer is not given or there is a problem with the question.**

1. During the fall Canned Food Drive, sixth graders brought in 1245 cans of vegetables.  $\frac{1}{3}$  of the cans were corn, 0.2 were beans, and 166 cans were peas. How many cans were not corn, peas or beans?

a. 189	b. 317	c. 516	d. 415
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2. Luke has a SpongeBob SquarePants bath toy that gets larger when it gets wet. Its dimensions when dry are 10" x 8" x 2". When wet, each measurement increases by 25%. What is the volume of SpongeBob when wet?

a. $312.5 \text{ in}^3$	b. $285 \text{ in}^3$	c. $259.5 \text{ in}^3$	d. $160 \text{ in}^3$
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3.  $2\frac{2}{4} \div (\frac{4}{3} \div \frac{2}{5}) = ?$

a. $\frac{4}{9}$	b. $\frac{33}{40}$	c. $\frac{11}{12}$	d. $\frac{3}{4}$
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4. What is the difference between LCM(15,25) and GCF(15,30)?

a. 30	b. 60	c. 90	d. 120
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5. If  $a \textcircled{R} b = a^2 - 2ab$ , find  $2 \textcircled{R} (3 \textcircled{R} 4)$ .

a. 5	b. 64	c. 45	d. 0
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6. A Rubik's Cube is a 3-inch cube. How many of them can Patrick pack into a package that measures 12 inches x 14 inches x 8 inches?

a. 49	b. 50	c. 24	d. 32
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7. Math Team students filled the Rave for the screening of *Counting with Gauss - The Musical* starring Miley Cyrus and Nick Jonas. If  $\frac{5}{9}$  of the 225 students in the theatre bought popcorn and a drink,  $\frac{13}{18}$  bought popcorn,  $\frac{1}{6}$  bought a drink only, how many students did not have popcorn or a drink?

a. 50 students	b. 25 students	c. 75 students	d. 95 students
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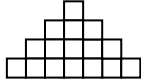
8. Matthew, Logan and Eric chose three points on a coordinate grid, then drew a triangle connecting them. Find the area of their triangle if their points were found at (-3,1), (-2,-3), and (3,-3).

a. $20 \text{ units}^2$	b. $22.5 \text{ units}^2$	c. $12.5 \text{ units}^2$	d. $10 \text{ units}^2$
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9.  $\frac{1}{3} + \frac{3}{5} + \frac{5}{7} = \frac{a}{b}$ , where a and b are relatively prime. Find a - b.

a. 71	b. 86	c. 95	d. 68
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10. How many squares of any size are in the figure given, if all the shapes shown are squares?



a. 20 squares	b. 23 squares	c. 25 squares	d. 28 squares
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11. Preston drew two squares. Square A has a perimeter of 84 inches while Square B has a perimeter of 60. What is the positive difference between the areas of the two squares?

a. 189	b. 150	c. 216	d. 240
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12. A bag contains 3 red marbles, 4 blue marbles, and 5 green marbles. Christina chooses a marble at random, replaces it, and then Lucy chooses another marble. What is the probability that Christina chooses a blue marble then Lucy a green one?

a. $\frac{5}{36}$	b. $\frac{5}{48}$	c. $\frac{5}{33}$	d. $\frac{5}{44}$
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13. Ben and Austin demonstrated supplementary angles with their arms. Ben's angle measured  $47.2^\circ$ . What did Austin's angle measure?

a. $42.8^\circ$	b. $137.8^\circ$	c. $47.8^\circ$	d. $132.8^\circ$
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14. Amanda buys an MP3 player on sale for \$77.60. The sale price is 20% off the regular price. What is the regular price?

a. \$ 61.48	b. \$ 99.00	c. \$ 71.48	d. \$ 97.00
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15.  $12321_5 - 12321_4 = \underline{\hspace{2cm}}_3$

a. 201021	b. 210012	c. 201201	d. 201102
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16. Christopher rides his bike to school 4.5 miles in 30 minutes. At this rate, how long will it take him to ride 12 miles?

a. 54 minutes	b. 80 minutes	c. 112 minutes	d. 135 minutes
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17. 68 is 20% of Daniel's number. What is 35% of his number?

a. 340	b. 220	c. 119	d. 102
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18. If  $3x + 23 = x - 9$ , what is  $x + 3$ ?

a. -19	b. -16	c. -13	d. -18
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19. Simplify:  $-2^2[3 - (-2 \cdot 4) \cdot (\frac{1}{2} - \frac{3}{4})]$

a. -20	b. 4	c. 20	d. -4
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20. Ali's scores in January were 96, 82, 98, 100, 94, and 88. Will's scores for the same time were 82, 100, 88, 98, 78, and 100. Find the positive difference of the median scores of each boy.

a. 10	b. 12	c. 2	d. 5
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21. 30 boons = 18 doons. 6 doons = 5 joons. 3 joons = 8 loons. How many loons is 3 boons?

a. 8	b. 5	c. 6	d. 4
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22. Radhika and Sophia went to Alabama Adventures. They were so excited they couldn't decide what to do first! There were 5 rollercoasters, 2 ferris wheels, 3 water slides and 4 arcades. If they used "eeny-meeny-miny-mo" to select a place to go first, what is the probability they chose a rollercoaster?

a. $\frac{5}{7}$	b. $\frac{3}{14}$	c. $\frac{5}{14}$	d. $\frac{3}{7}$
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23. Wilson formed a 9" by 12" sheet of construction paper into an open box by cutting out small squares on the corners and folding the edges up. If the cut out square is 1" on each side, what is the volume of the box Wilson formed?

a. $88 \text{ in}^3$	b. $70 \text{ in}^3$	c. $90 \text{ in}^3$	d. $72 \text{ in}^3$
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24. If Thomas' height is 60% of Peyton's height, what percent of 4 times Peyton's height is 3 times Thomas' height?

a. 60%	b. 55%	c. 45%	d. 40%
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25. The Final Four coaches are Tom Izzo, Mike Krzyzewski, Bob Huggins and Brad Stevens. Use the table below to determine which coach has the best winning percentage during their tenure at their current school.

Coach	Wins	Losses
Izzo	364	145
Krzyzewski	787	222
Huggins	80	29
Stevens	88	14

a. Huggins	b. Stevens	c. Izzo	d. Krzyzewski
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## Tiebreakers

1. Find the area of a circle if its circumference is 16 cm.
2. By what amount does  $0.\overline{54}$  exceed 0.54?
3. Find the number of distinct permutations of SOPHIEGERMAIN.

Lucy has test scores of 78, 98, 96, 100, and 98. What is the minimal score she needs on the next test to have a 95 or greater average?

$$\frac{(0.09 \times 10^5)(4,000,000)}{(2000)(0.000006)}$$

Simplify and write in scientific notation: