Team Name_____

MATHLETES CHALLENGE 2016

CHAMPIONSHIP

TEST 2

1.

134070012_2

Salid bought 35 feet of window trim at a hardware store. The trim cost $1.75 per foot, including sales tax. If Salid paid with a $100.00 bill, how much change should he have received?

A $20.00

B $38.75

C $61.25

D $80.00

allowed

2.

124070024_4

A pile of newspapers in Ms. McGrath's art class was $17\frac{3}{4}$ inches high. Each consecutive week, for the next 5 weeks, the height of the pile of newspapers increased by $8\frac{7}{12}$ inches. What was the height, in inches, of the pile after 3 weeks?

A $25\frac{3}{4}$

B $26\frac{1}{4}$

C $42\frac{1}{4}$

D $43\frac{1}{2}$

3

134050406_3

Members of the Garner High School yearbook committee need to put 1,344 student photos on 24 pages in the yearbook. They want to put the same number of student photos on each page. How many student photos will they put on each page in the yearbook?

A 51

B 52

C 56

D 61

134040031_2

4

Which decimal makes the number sentence true?

$0.27 > \_\_?\_\_$

A 0.4

B 0.26

C 0.3

D 0.28

5.

134040072_3

Movie tickets cost $9.25 each and a large order of popcorn costs $7.75. What is the total cost of 5 movie tickets and a large order of popcorn?

A $22.00

B $48.00

C $54.00

D $85.00

134070300_2

6

A cereal company puts a colored ring in each box of cereal. There are 6 different ring colors. The colors of the rings in each of 50 cereal boxes are shown in the table below.

RING COLORS IN CEREAL BOXES

Color	Number of Rings
Red	7
Blue	15
Green	8
Purple	10
Yellow	5
Orange	5

Based on the data, what is the probability that the next cereal box will contain a blue or a yellow ring?

A $\frac{1}{6}$

B $\frac{2}{5}$

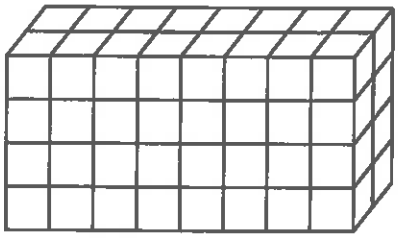
C $\frac{3}{5}$

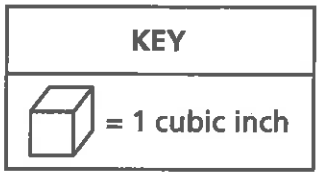
D $\frac{2}{3}$

7.

144050097_3

Jack used cubes to make the right rectangular prism below.





He then made a smaller right rectangular prism using $\frac{1}{4}$ of the number of cubes. What was the volume, in cubic inches, of the smaller right rectangular prism?

A 8

B 13

C 16

D 64

8.

144050085_1

Min wants to make 100 name tags with ribbons attached to them. Each name tag requires five centimeters of ribbon. She has 3.25 meters of ribbon. Exactly how many more centimeters of ribbon does Min still need to make 100 name tags?

A 175

B 305

C 325

D 825

154070081_2

9 The three steps shown below were used to find an expression equivalent to $\frac{2}{5}(15x - 30y) + 10x$.

Step 1: ___?___

Step 2: $16x - 12y$

Step 3: $4(4x - 3y)$

Which expression could be used as Step 1?

A $\frac{2}{5}(25x - 30y)$

B $6x - 12y + 10x$

C $6x - 30y + 10x$

D $15(x - 2y) + 10x$

144050003_2

10 Which expression is equivalent to 32?

A $(30 + 6) \div 3$

B $2 \times (9 + 7)$

C $9 \times (3 + 5)$

D $6 + 2 \times 4$

11.

134050007_2

In a shipment of new books for a library, $\frac{5}{12}$ of the books were poetry and $\frac{2}{5}$ were biographies. The remainder of the books in the shipment were mysteries. What fraction of the books in the shipment were mysteries?

A $\frac{2}{12}$

B $\frac{11}{60}$

C $\frac{7}{17}$

D $\frac{49}{60}$

12

134050407_4

In a math game, a player chooses two numbers, as described below.

- First number: a mixed number between 2 and 10
- Second number: 1, 2, 3, 4, or 5

Which statement describes the product of the two numbers a player chooses?

A The product must be a whole number less than the second number.

B The product must be a value less than the second number.

C The product must be a whole number greater than the second number.

D The product must be a value greater than the second number.

144050035_3

13

Josie has a 1,364-page book to read over summer vacation. She wants to read the same number of pages each day for 62 days. What is the total number of pages Josie will need to read each day?

A 28

B 27

C 22

D 17

144040074_4

14

Equation 1: $\frac{3}{10} + \frac{15}{100} = \frac{18}{100}$

Equation 2: $\frac{4}{10} + \frac{32}{100} = \frac{72}{100}$

Equation 3: $\frac{7}{10} + \frac{2}{100} = \frac{27}{100}$

Equation 4: $\frac{6}{10} + \frac{27}{100} = \frac{87}{100}$

Which equation or equations are true?

A equation 1 only

B equation 2 only

C equations 3 and 4 only

D equations 2 and 4 only

15.

144080042_3

Jenny wants to rent a truck for one day. She contacted two companies. Laguna's Truck Rentals charges $20 plus $2 per mile. Salvatori's Truck Rentals charges $3 per mile. After how many miles will the total cost for both companies be the same?

A 4

B 6

C 20

D 60

144080062_1

The cost to rent a paddleboat at the city park includes an initial fee of $7.00, plus $3.50 per hour. Which equation models the relationship between the total cost, y, and the number of hours, x, that the paddleboat is rented?

A $y = 3.5x + 7$

B $y = 7x + 3.5$

C $y = \frac{x}{7} + 3.5$

D $y = \frac{x}{3.5} + 7$

17.

134070027_3

A solid object was sliced to form two new objects. Each of the two new objects had a circular base. Which shape could **not** have been the original object?

A cone

B cylinder

C prism

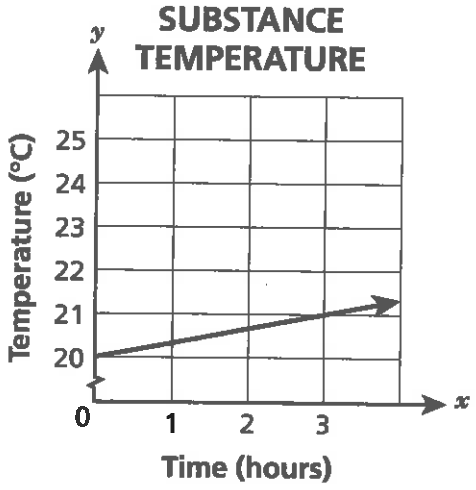
D sphere

18.

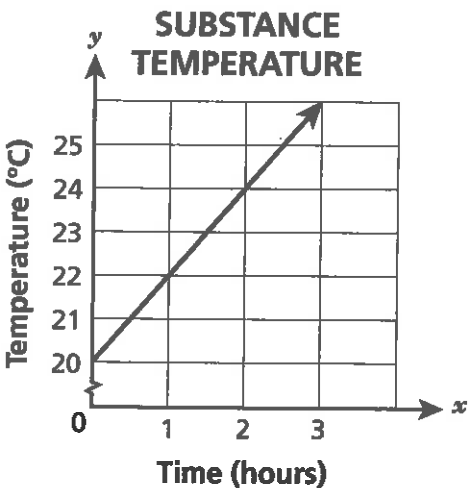
144080020_4

During an experiment, the temperature of a substance increased at a constant rate of three degrees Celsius (°C) per hour. Which graph represents this relationship?

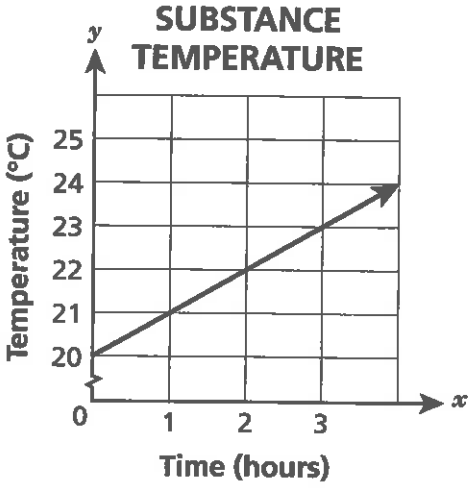
A



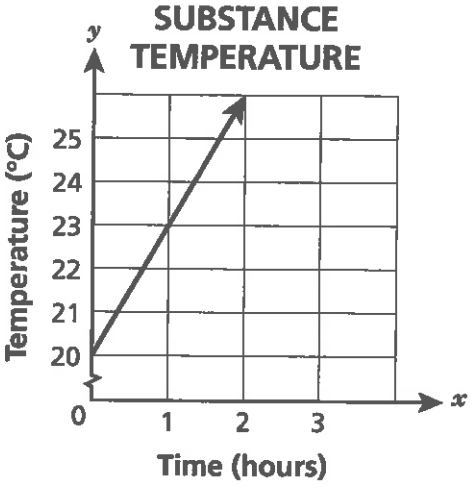
C



B



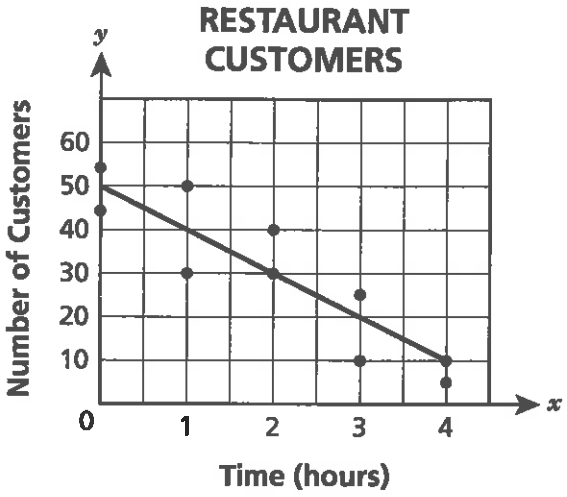
D



19.

144080110_1

The scatter plot below shows the numbers of customers in a restaurant for four hours of the dinner service on two different Saturday nights. The line shown models this relationship, and $x = 0$ represents 7 p.m.



What does the value of the *y*-intercept represent?

A the average number of customers at 7 p.m.

B the average number of customers at 11 p.m.

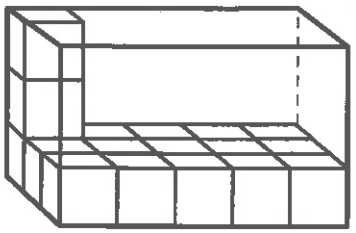
C the average change in the number of customers each hour

D the average change in the number of customers during four hours of the dinner service

144050092_4

20

Rashad is filling a toy box with wooden blocks that are each a unit cube in size. He filled the bottom layer of a toy box with 15 wooden blocks. He then stacked two more wooden blocks on top of the bottom layer. The partially filled toy box is shown below.



What was the total volume, in cubic units, of the toy box?

A 15

B 17

C 30

D 45

MATHLETES 2016

Championship – Test 1 – Answer Key

1. D
2. D
3. B
4. A
5. C
6. D
7. B
8. D
9. B
10. B
11. D
12. C
13. B
14. A
15. C
16. B
17. C
18. C
19. C
20. C

Championship – Test 2 – Answer Key

1. B
2. D
3. C
4. B
5. C
6. B
7. C
8. A
9. B
10. B
11. B
12. D
13. C
14. D
15. C
16. A
17. C
18. D
19. A
20. D