

1. Which fraction is equivalent to 45%?
 - A. $\frac{5}{25}$
 - B. $\frac{9}{25}$
 - C. $\frac{9}{20}$
 - D. $\frac{4}{5}$

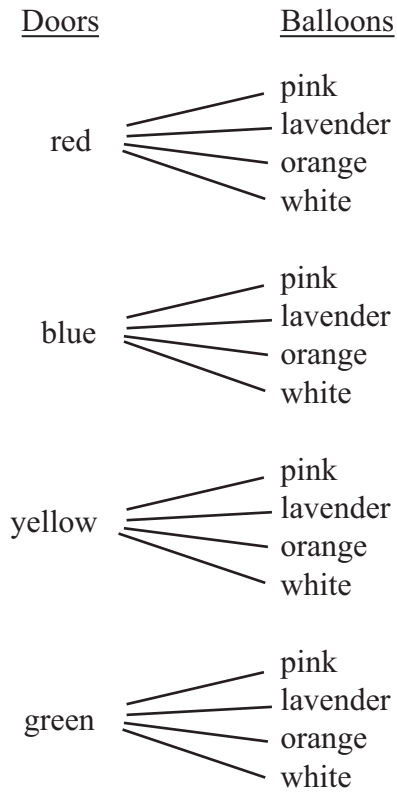
2. Which number shows 1.42×10^8 in standard form?
 - A. 142,000
 - B. 142,000,000
 - C. 1,420,000,000
 - D. 14,200,000,000

3. The school cafeteria bought 15 tables. After receiving a discount of \$250, the total price was \$5,000. Which equation could be used to find the cost, t , of each table?
 - A. $15t + 250 = 5,000$
 - B. $15t - 250 = 5,000$
 - C. $15t + 250t = 5,000$
 - D. $15t - 250t = 5,000$

4. What is the value of $\frac{-48}{-12}$?

- A. -36
- B. -4
- C. 4
- D. 36

5. Use the information below to answer the question.

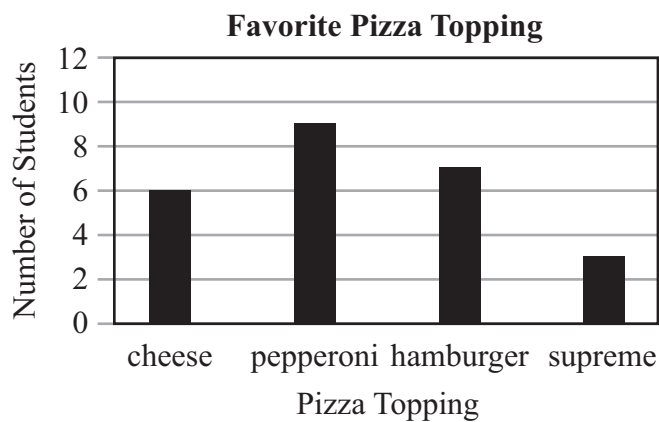


A contest winner randomly selects a door color and the color of a balloon behind the door. When the player pops the balloon, the player wins the prize inside the balloon. The colors of the doors and the balloons are shown in the diagram. What is the probability that the player randomly selects a red door and a white balloon?

- A. $\frac{1}{16}$
- B. $\frac{1}{8}$
- C. $\frac{1}{4}$
- D. 1

6. A circle has a diameter of 20 inches. What is the circumference of the circle?
- A. 31.4 in.
 - B. 62.8 in.
 - C. 314 in.
 - D. 628 in.

7. Use the graph below to answer the question.



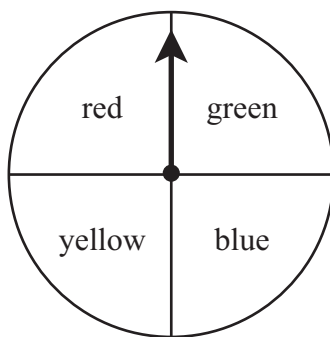
Each student in a class of 25 students was surveyed about his or her favorite pizza topping. What percentage of the students selected cheese or hamburger topping as their favorite?

- A. 40%
 - B. 48%
 - C. 52%
 - D. 60%
8. Stacy has 20 blocks. Of the 20 blocks, 16 are cubes. What percentage of the blocks are cubes?
- A. 75%
 - B. 80%
 - C. 120%
 - D. 125%

9. The total cost of 3 sweaters is less than \$90.33. Each sweater costs s dollars. Which inequality represents this situation?

- A. $90.33 - 3 < s$
- B. $3s > 90.33$
- C. $90.33 - 3 > s$
- D. $3s < 90.33$

10. Use the spinner and the table below to answer the question.



Results of 100 Spins

Color	Number
red	30
blue	19
green	26
yellow	25

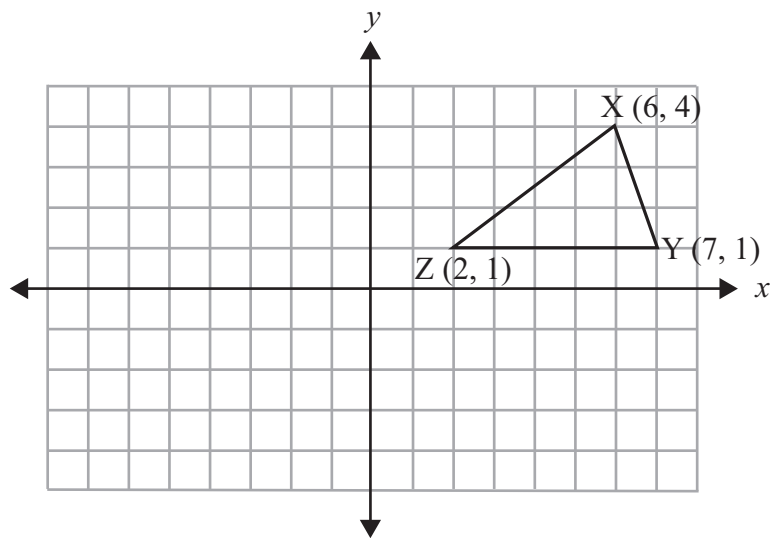
The arrow on the spinner is spun 100 times. The table shows the results from the 100 spins. Which result in the table matches exactly the theoretical probability for that color?

- A. red
- B. blue
- C. green
- D. yellow

11. What is the solution of the inequality $x - 26 > 65$?

- A. $x > 39$
- B. $x < 39$
- C. $x > 91$
- D. $x < 91$

12. Use the coordinate grid below to answer the question.



Given $\triangle XYZ$, what are the new coordinates of point X after a translation of 4 units left and 5 units down?

- A. $(2, -1)$
- B. $(1, 0)$
- C. $(3, -4)$
- D. $(-2, -4)$

13. What is the value of x in $2x + 4 = 7$?

- A. $x = -1.5$
- B. $x = 1.5$
- C. $x = 6$
- D. $x = 22$

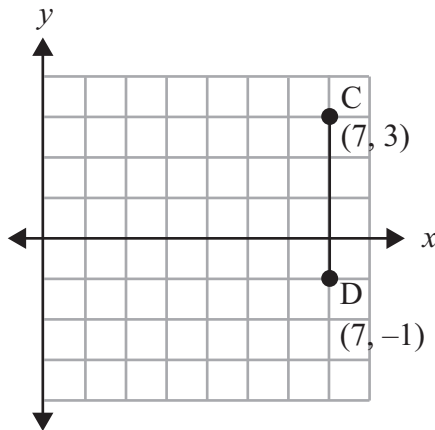
14. Which fraction is between 0.6 and 0.7?

- A. $\frac{2}{5}$
- B. $\frac{8}{10}$
- C. $\frac{11}{20}$
- D. $\frac{2}{3}$

15. A car travels 70 miles per hour. Which expression shows the distance the car travels in h hours?

- A. $70 - h$
- B. $70h$
- C. $70 + h$
- D. $\frac{70}{h}$

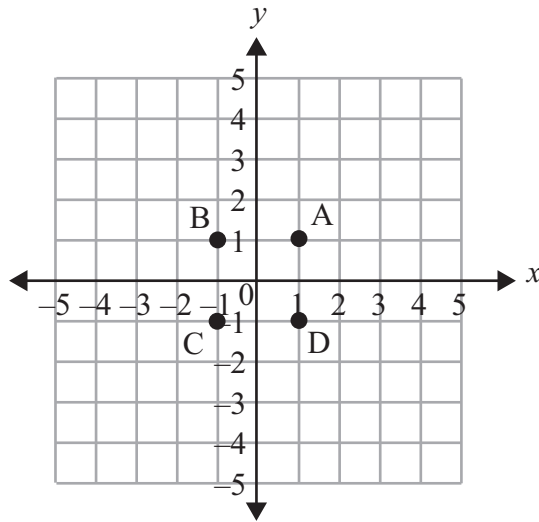
16. Use the coordinate grid below to answer the question.



What is the length of \overline{CD} ?

- A. -5 units
 - B. -4 units
 - C. 4 units
 - D. 5 units
17. Which method shows how to select numbers that are multiples of 6?
- A. The ones digit is 0, 2, 4, 6, or 8, and the sum of digits in the number is a multiple of 3.
 - B. The ones digit is 0, 2, 4, 6, or 8, and the sum of digits in the number is a multiple of 5.
 - C. The ones digit is 1, 3, 5, 7, or 9, and the sum of digits in the number is a multiple of 3.
 - D. The ones digit is 1, 3, 5, 7, or 9, and the sum of digits in the number is a multiple of 5.
18. What is the value of the expression $\frac{8(x+5)}{2}$ when $x = 3$?
- A. 14.5
 - B. 16
 - C. 21.5
 - D. 32

19. Use the coordinate grid below to answer the question.



What point corresponds with the ordered pair (1, -1)?

- A. A
- B. B
- C. C
- D. D

20. Use the list of numbers below to answer the question.

List of Numbers

16	11	12	24	12
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What is the range of the numbers?

- A. 11
- B. 12
- C. 13
- D. 15

21. The school library places 3 book orders. The costs of the book orders are \$272.13, \$416.48, and \$53.98. Which equation shows how to estimate the cost of these orders to the nearest ten dollars?

A. $\$270 + \$410 + \$50 = \730

B. $\$270 + \$420 + \$50 = \740

C. $\$280 + \$420 + \$50 = \750

D. $\$280 + \$420 + \$60 = \760

NeSA-M Grade 7 Reference Sheet



Shape	Area	Circumference
Circle	$A = \pi r^2$	$C = \pi d = 2\pi r$
Triangle	$A = \frac{1}{2}bh$	Perimeter
Rectangle	$A = lw$	$P = 2l + 2w$
Trapezoid	$A = \frac{1}{2}h(b_1 + b_2)$	
Parallelogram	$A = bh$	
Square	$A = s^2$	

Key	
b = base	w = width
B = area of base	d = diameter
h = height	r = radius
l = length	
Use 3.14 for π	

3 – Dimensional Shape	Volume
Rectangular Prism	$V = lwh = Bh$

Percent Change
$\% \text{ change} = \frac{\text{difference in amount}}{\text{original amount}}$

Standard Units	Metric Units
Conversions – Length	
1 yard (yd) = 3 feet (ft) = 36 inches (in.)	1 meter (m) = 100 centimeters (cm)
1 mile (mi) = 1,760 yards (yd) = 5,280 feet (ft)	1 meter (m) = 1,000 millimeters (mm)
	1 kilometer (km) = 1,000 meters (m)
Conversions – Volume	
1 cup = 8 fluid ounces (fl oz)	1 liter (l) = 1,000 milliliters (ml)
1 pint (pt) = 2 cups	1 liter (l) = 1,000 cubic centimeters (cu. cm)
1 quart (qt) = 2 pints (pt)	
1 gallon (gal.) = 4 quarts (qt)	
Conversions – Weight/Mass	
1 pound (lb) = 16 ounces (oz)	1 gram (g) = 1,000 milligrams (mg)
1 ton = 2,000 pounds (lb)	1 kilogram (kg) = 1,000 grams (g)

**Grade 7
Mathematics Practice Test
Answer Key**

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