

Nebraska State Accountability

**Grade 7
Mathematics
Practice Test**

Name:

Directions:

On the following pages are multiple-choice questions for the Grade 7 Practice Test, a practice opportunity for the *Nebraska State Accountability–Mathematics (NeSA–M)*.

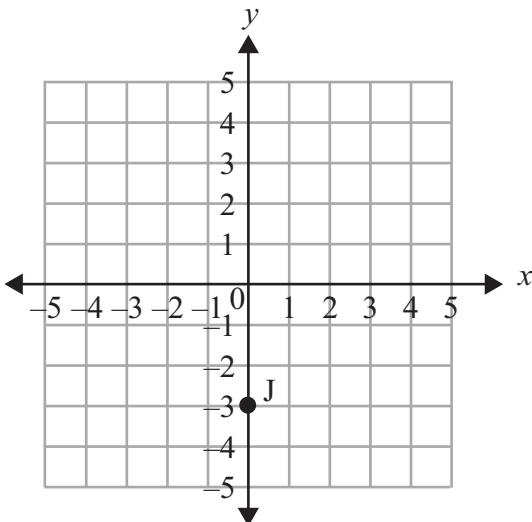
Each question will ask you to select an answer from among four choices.

For all questions:

- Read each question carefully and choose the best answer.
- You may use scratch paper to solve the problems.
- The Mathematics Reference Sheet is provided in the back of the test booklet. You may refer to this page any time during the test.
- You may not use a calculator on this test.
- Be sure to answer ALL the questions.

Remember only one of the answers provided is the correct response.

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



What are the coordinates of point J?

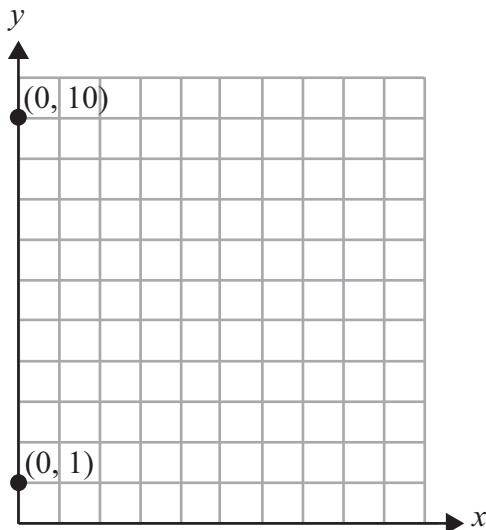
- A. (0, 3)
 - B. (-3, 0)
 - C. (3, 0)
 - D. (0, -3)
2. John eats $\frac{3}{5}$ of a candy bar. What percent of the candy bar does he eat?

- A. 6%
- B. 30%
- C. 35%
- D. 60%

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3. A small submarine started its dive at sea level and descended 30 feet per minute. Which integer represents the submarine's depth after seven minutes?
- A. -210 feet
 - B. -23 feet
 - C. 37 feet
 - D. 210 feet

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



What is the distance between the points at (0, 1) and (0, 10)?

- A. 8 units
- B. 9 units
- C. 10 units
- D. 11 units

5. Use the table below to answer the question.

Calorie Table

Food	Calories
Cheddar cheese, 1 ounce	114
Orange, 1 medium	70
Egg, 1 large	75
Strawberries, 1 serving	45
Pecans, 1/4 cup	185

Which expression represents the number of calories in r oranges and $\frac{1}{4}$ cup of pecans?

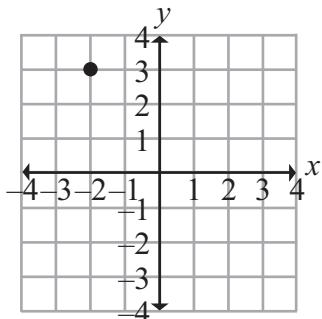
- A. $70 + 185$
B. $75r + 185$
C. $70r + 185$
D. $75 + 185$
6. Which represents the value of s in $s + 12 \geq 100$?
A. $s > 88$
B. $s < 88$
C. $s \geq 88$
D. $s \leq 88$
7. What is 6.43×10^7 in standard notation?
A. 643×10^5
B. 64,300,000
C. 6,430,000,000
D. 64.3×10^{10}

MATHEMATICS PRACTICE TEST

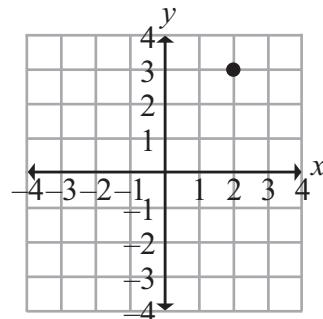
8. Pat has his own lawn mowing service. The maximum Pat charges to mow a lawn is \$20. Which inequality represents the amount Pat could charge, c , to mow a lawn?
- A. $c > 20$
B. $c \geq 20$
C. $c = 20$
D. $c \leq 20$
9. The attendance at three concerts was 876, 647, and 856. Which expression shows how to estimate the total attendance at the concerts?
- A. $800 + 600 + 800$
B. $900 + 700 + 900$
C. $900 + 600 + 900$
D. $1,000 + 700 + 900$

10. Which graph shows the ordered pair $(-2, 3)$ plotted correctly?

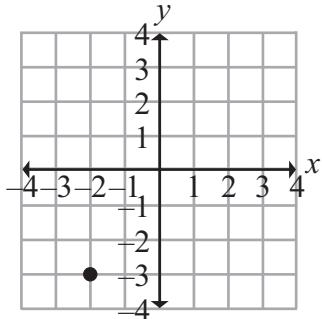
A.



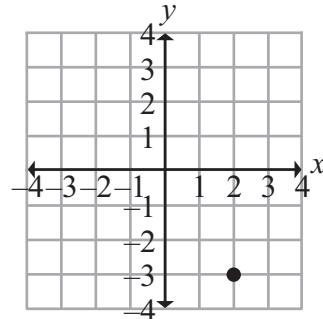
B.



C.



D.



11. What is 35% of 80?

- A. 28
- B. 45
- C. 115
- D. 2,800

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12. Use the set of numbers below to answer the question.

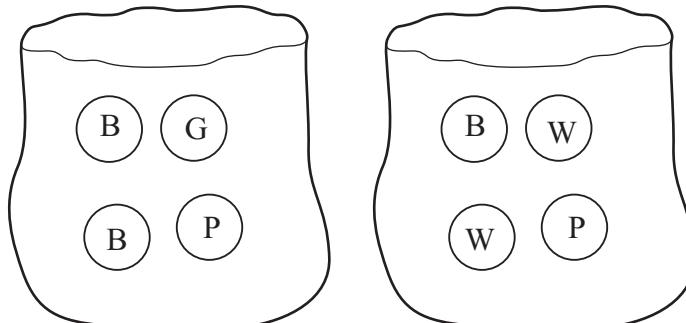
35	20	30	25	20
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What is the median of the list of numbers?

- A. 30
 - B. 20
 - C. 25
 - D. 26
13. Which rational number is the greatest?
- A. 0.55
 - B. 0.6
 - C. $\frac{9}{20}$
 - D. $\frac{1}{2}$
14. Mikel walks down 5 flights of stairs. Each flight has 8 steps. Which describes Mikel's descent?
- A. $-5 + 8 = 3$
 - B. $(-5) + (-8) = -13$
 - C. $(-5)(-8) = 40$
 - D. $(-5)(8) = -40$

15. Use the picture below to answer the question.

Bags of Marbles



Bag A

Bag B

B = blue marble
G = green marble

W = white marble
P = purple marble

One marble is drawn at random from each bag. What is the probability that neither marble is blue?

- A. $\frac{1}{16}$
- B. $\frac{3}{8}$
- C. $\frac{1}{2}$
- D. $\frac{3}{4}$

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16. Middle-school students sold cookies in packages of 12. On the first day, they sold x packages. On the second day, they sold twice as many packages as on the first day. Which expression shows the number of cookies they sold on the second day?

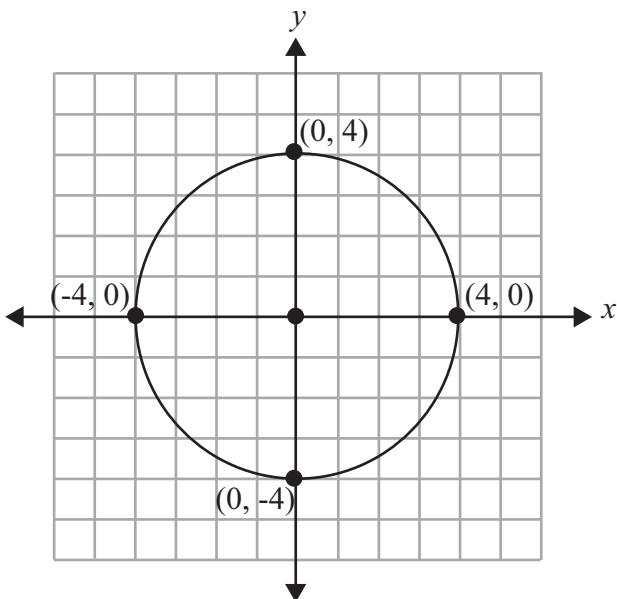
A. $12(2x)$

B. $12(x + 2)$

C. $12(x - 2)$

D. $\frac{12x}{2}$

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



What is the circumference of the circle?

A. 12.56 units

B. 25.12 units

C. 50.24 units

D. 251.2 units

18. Use the chart below to answer the question.

Spinner Experiment

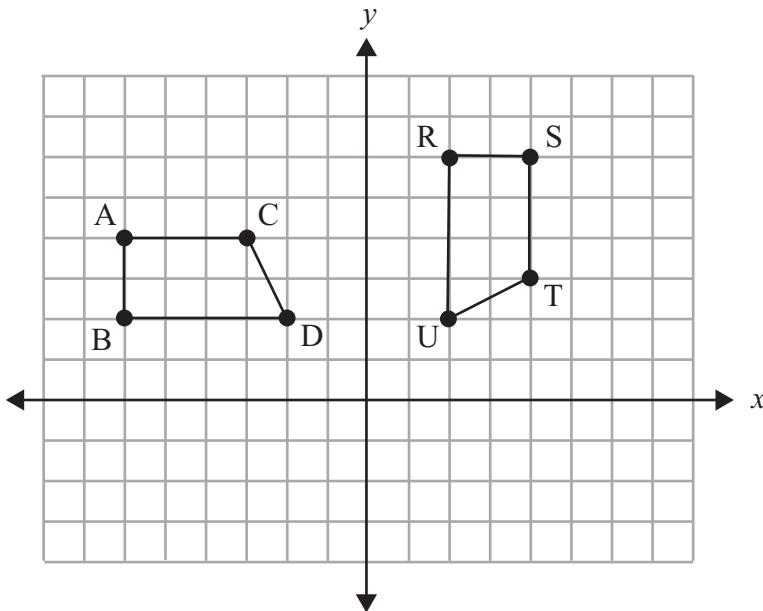
Color	Tally	Frequency
red		27
green		20
blue		28
orange		25

Students are given a colored spinner divided equally between red, green, blue, and orange sections. Students spin the spinner 100 times and collect the data in a chart. Which statement reflects the relationship between the experimental and theoretical probability of the spinner landing on green?

- A. There is not enough information to calculate experimental probability.
B. The experimental probability is greater than theoretical probability.
C. The experimental probability and theoretical probability are equal.
D. The theoretical probability is greater than the experimental probability.
19. Carmen has saved \$24 to buy a DVD player that costs \$96. She plans on saving \$12 each week. The equation $12w + 24 = 96$ can be used to find the number of weeks, w , when she will have enough money to buy the DVD player. How many weeks before Carmen has enough for the DVD player?
- A. 6 weeks
B. 8 weeks
C. 10 weeks
D. 12 weeks

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



What transformation of trapezoid ACDB will create trapezoid STUR?

- A. dilation
- B. rotation
- C. reflection
- D. translation

21. Use the table below to answer the question.

Median House Prices (1970 - 2000)

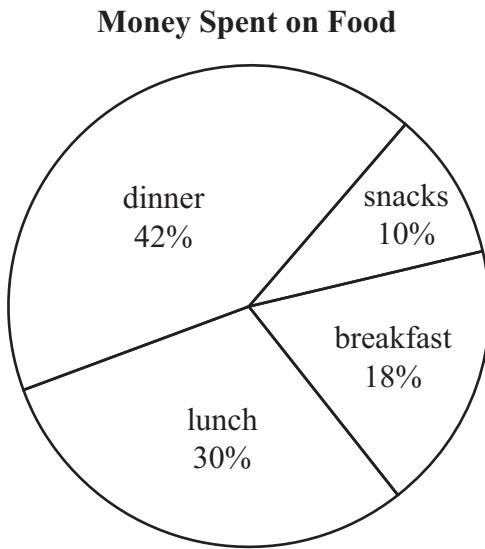
Year	Median House Price
1970	\$23,400
1975	\$39,300
1980	\$64,600
1985	\$84,300
1990	\$122,900
1995	\$133,900
2000	\$169,000

Which describes the trend of the data in the table?

- A. always decreasing
 - B. decreasing followed by increasing
 - C. always increasing
 - D. increasing followed by decreasing
22. The temperature is 8° F. As a cold front moves in, the temperature drops 6° F per hour. What is the temperature at the end of 3 hours?
- A. -26° F
 - B. -10° F
 - C. 5° F
 - D. 26° F

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23. Use the graph below to answer the question.



A shopper spent \$100 at the store. How many dollars did the shopper spend on snacks?

- A. \$10
- B. \$18
- C. \$30
- D. \$42

24. What is the value of the expression $8x - 10$ when $x = 5$?

- A. 3
- B. 4
- C. 30
- D. 50



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 Practice Test**Answer Key**

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