

Nebraska State Accountability

**Grade 6
Mathematics
Practice Test**

Name:

Directions:

On the following pages are questions for the Grade 6 Practice Test, a practice opportunity for the *Nebraska State Accountability–Mathematics (NeSA–M)*.

Multiple choice questions will ask you to select an answer from among four choices. For some questions, there may be two parts, Part A and Part B, where each part has a multiple choice question that will ask you to select an answer from among four choices. Multiple select questions will ask you to select multiple correct answers from among five or six answer choices. These types of questions may be found in your test booklet.

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 use a calculator **ONLY** for questions 1 - 7. You may **NOT** use a calculator for any other questions on this test.
- Be sure to answer **ALL** the questions.

For multiple choice questions, only one of the answers provided is the correct response. For multiple select questions, more than one of the answers provided may be a correct response.

When you come to the word **STOP** at the end of the section, you have finished the calculator section of the test. You may review only the calculator section to check your answers. At this time, your calculator must be collected.

You may use a calculator for questions 1 - 7.

1. Use the table below to answer the question.

Sale Items

T-shirts	Price
Science Club	\$15.00
Student Council	\$13.00
Reading Classic	\$9.00
Math Club	\$15.00

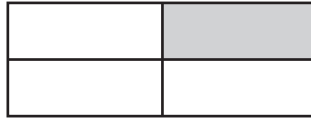
What is the mean price of the t-shirts?

- A. \$12.00
 - B. \$13.00
 - C. \$14.00
 - D. \$15.00
2. Which list orders the numbers from least to greatest?

- A. $6.25, 6.5, 6\frac{4}{5}, 6\frac{3}{4}$
- B. $6.5, 6.25, 6\frac{3}{4}, 6\frac{4}{5}$
- C. $6.25, 6.5, 6\frac{3}{4}, 6\frac{4}{5}$
- D. $6.5, 6\frac{4}{5}, 6.25, 6\frac{3}{4}$

3. A salad dressing is made by combining 2 parts vinegar with 5 parts oil. How many ounces of oil should be mixed with 9 ounces of vinegar?
- A. 2
 - B. 3.6
 - C. 22.5
 - D. 63
4. When $n = 11$, what is the value of $10 - (n + 6)$?
- A. -7
 - B. 5
 - C. 7
 - D. 27
5. Molly got a haircut for \$25 and she left a 15% tip. What was Molly's final cost?
- A. \$25.15
 - B. \$26.50
 - C. \$27.50
 - D. \$28.75

6. Use the picture below to answer the question.



Which lists the fraction, decimal, and percent that represent the shaded part?

- A. $\frac{1}{4}$, 0.20, 20%
 - B. $\frac{1}{4}$, 0.25, 25%
 - C. $\frac{1}{4}$, 0.4, 40%
 - D. $\frac{1}{4}$, 0.75, 75%
7. James has a collection of 100 comic books. He sells $\frac{1}{4}$ of his collection. How many comic books does James sell?
- A. 25 books
 - B. 50 books
 - C. 75 books
 - D. 100 books



**THIS IS THE END OF THE
CALCULATOR SECTION OF THE TEST**

You may NOT use a calculator for any other questions on this test.

Raise your hand and notify your Examiner or Proctor that you are ready to turn in your calculator.

Once your Examiner has collected your calculator and given you permission, you may go on to the non-calculator section of the test.



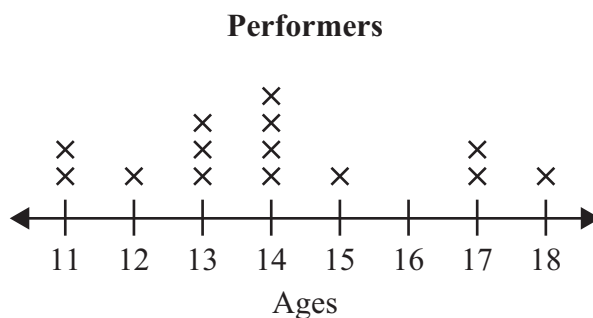
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DO NOT WRITE ON THIS PAGE**

You may NOT use a calculator for any other questions on this test.

8. A field is in the shape of a trapezoid. The shorter base of the trapezoid is 130 yards long and the longer base is 390 yards long. The distance between the two bases is 75 yards. What is the area of the field?
- A. 9,750 yards²
B. 19,500 yards²
C. 29,250 yards²
D. 39,000 yards²
9. Which value of y makes $\frac{4(y-3)}{2} = 6$ true?
- A. 6
B. 7
C. 9
D. 15
10. Which set of integers is in order from least to greatest?
- A. -9, -6, -3, 7, 11
B. -3, -6, 7, 11, -9
C. 11, -9, 7, -6, -3
D. 7, 11, -6, -3, -9

11. What is the value of $|3 + 5| - |-4|$?
- A. -12
 - B. -4
 - C. 4
 - D. 12
12. A group of students make a map of the area around their school. They place the school at $(0, 0)$. The nearest store is placed at the point $(-5, 7)$. In which quadrant is the point representing the nearest store?
- A. Quadrant I
 - B. Quadrant II
 - C. Quadrant III
 - D. Quadrant IV

13. Use the line plot below to answer the question.



The line plot shows the ages of the performers in a play. How many performers are older than 13?

- A. 4
- B. 8
- C. 11
- D. 14

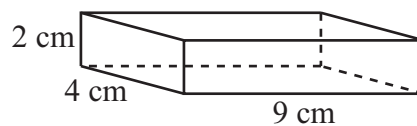
14. What is 0.3×427 ?

- A. 0.1281
- B. 1.281
- C. 12.81
- D. 128.1

15. Mr. Santoz ordered 8 large pizzas for a class party. After the party only $\frac{5}{6}$ of a sausage pizza and $1\frac{3}{4}$ of a pepperoni pizza remained. Which is the **best** estimate of how many pizzas were eaten?

- A. 4
- B. 5
- C. 6
- D. 7

16. Use the picture below to answer the question.

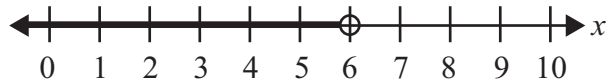


What is the volume of the rectangular prism?

- A. 15 cubic centimeters
- B. 22 cubic centimeters
- C. 72 cubic centimeters
- D. 124 cubic centimeters

17. What is the value of y in the equation $\frac{y}{4} = 8$?
- A. 2
 - B. 4
 - C. 12
 - D. 32
18. Which algebraic expression represents four times the quantity 22 less than x ?
- A. $4(x - 22)$
 - B. $(4 \cdot 22) - x$
 - C. $4(22 - x)$
 - D. $(x \cdot 4) - 22$
19. Owen has $1\frac{1}{2}$ gallons of fruit punch. He pours the punch into glasses that hold $\frac{1}{16}$ gallon. How many glasses can Owen fill with fruit punch?
- A. 11 glasses
 - B. 24 glasses
 - C. 32 glasses
 - D. 48 glasses

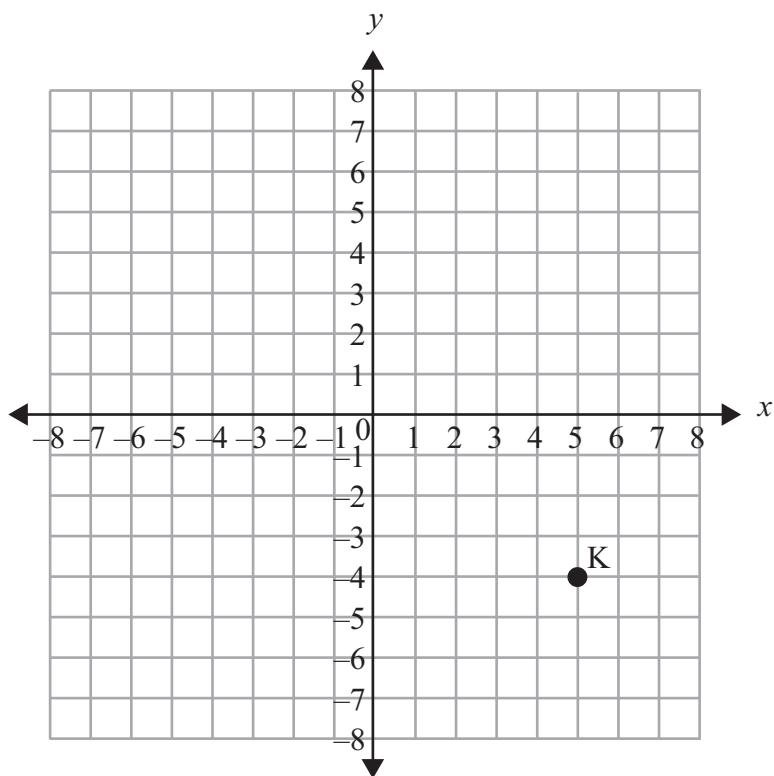
20. Use the graph below to answer the question.



Which inequality is represented by the graph?

- A. $x < 6$
 - B. $x > 6$
 - C. $x < 0$
 - D. $x > 0$
21. Which number written in exponential notation is equivalent to 343?
- A. 3^7
 - B. 7^3
 - C. 7^{49}
 - D. 294^{49}

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



Which ordered pair matches point K?

- A. $(-5, -4)$
- B. $(-4, -5)$
- C. $(-4, 5)$
- D. $(5, -4)$

23. Which expression is the prime factorization of 100?

- A. $2^2 \cdot 5^2$
- B. $2^2 \cdot 25$
- C. $4 \cdot 5^2$
- D. $4 \cdot 25$

24. This question has two parts. Answer part A, and then answer part B.

Part A

Which step will solve the equation $x + 8 = 12$?

- A. Add 8 to both sides of the equation.
- B. Subtract 8 from both sides of the equation.
- C. Add 12 to both sides of the equation.
- D. Subtract 12 from both sides of the equation.

Part B

What is the solution to the equation $x + 8 = 12$?

- A. $x = 4$
- B. $x = 16$
- C. $x = 20$
- D. $x = 24$

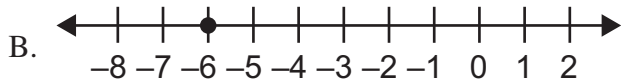
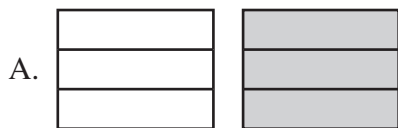
25. Use the expression below to answer the question.

$$5x + 3(2x - 7)$$

Select **all** of the expressions that are equivalent to the expression shown. Select **all**.

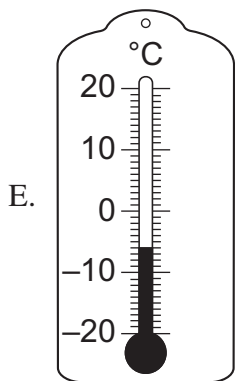
- A. $10x - 10$
- B. $11x - 7$
- C. $11x - 21$
- D. $5x + 6x - 7$
- E. $5x + 6x - 21$
- F. $5x + 2x + 2x + 2x - 21$

26. Select **all** of the representations of -6 . Select **all**.



C. $6 - 6$

D. negative six



F. $|6|$

NeSA-M Grade 6 Reference Sheet



Shape	Area	Perimeter
Triangle	$A = \frac{1}{2}bh$	
Rectangle	$A = lw$	$P = 2l + 2w$
Parallelogram	$A = bh$	
Square	$A = s \times s$	

Key	
b = base	l = length
h = height	w = width
B = area of base	s = side length
H = height of triangular base	
s_1, s_2, s_3 are the lengths of each side of the triangular base	

3 – Dimensional Shape	Volume	Surface Area
Rectangular Prism	$V = lwh = Bh$	$SA = 2lw + 2lh + 2wh = 2B + 2lh + 2wh$
Triangular Prism	$V = \frac{1}{2}lwh = Bh$	$SA = bh + (s_1 + s_2 + s_3)H = 2B + (s_1 + s_2 + s_3)H$

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 6
Mathematics Practice Test
Answer Key**

Sequence	Key	Points
1	B	1
2	C	1
3	C	1
4	A	1
5	D	1
6	B	1
7	A	1
8	B	1
9	A	1
10	A	1
11	C	1
12	B	1
13	B	1
14	D	1
15	B	1
16	C	1
17	D	1
18	A	1
19	B	1
20	A	1
21	B	1
22	D	1
23	A	1
24	Part A: B Part B: A	2
25	C, E, F	2
26	B, D, E	2

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