

ADV Math 6 - Unit 7: Rational Explorations

Name: _____

End of Unit Test

Class Period: 1 2 3 4 Date: _____

- 1) What does the absolute value of a number tell you about the number? 1) _____
 a) Absolute value gives the distance of a point from the origin.
 b) Absolute value always gives the opposite of a number.
 c) Absolute value gives the distance from zero.
 d) Absolute value gives the distance from ECMS to Disney World.
- 2) How could you use a number line to compare and order rational numbers? 2) _____
 a) The farther to the left a number is, the greater the number. The farther to the right a number is, the smaller the number.
 b) The farther to the left a number is, the smaller the number. The farther to the right a number is, the greater the number.
 c) Numbers closer to zero are always greater than numbers farther from zero.
 d) You cannot use a number line to compare and order rational numbers.
- 3) Evaluate $|-15| + |15|$ 3) _____
 a) -15 b) 0 c) 15 d) 30
- 4) Evaluate: $-|2|$ 4) _____
 a) -4 b) -2 c) 0 d) 2
- 5) Which choice shows the numbers in order from least to greatest? 5) _____
 a) -10, 0, $|-12|$, $|-9|$ b) -10, 0, $|-9|$, $|-12|$
 c) $|-12|$, -10, $|-9|$, 0 d) $|-12|$, $|-9|$, 0, -10
- 6) Which of the following is NOT an integer? 6) _____
 a) 3 b) 14.8 c) 19 d) 0
- 7) Which integer represents, "Mariah won 75 dollars in a raffle?" 7) _____
 a) -75 b) 0 c) 75 d) 175
- 8) Which integer represents, "Caroline went diving 120 feet underwater?" 8) _____
 a) -120 b) -20 c) $|-120|$ d) 120
- 9) The table below shows today's temperature for 5 cities. Which statement is TRUE? 9) _____

City	McKinley Park	Bethel	Fairbanks	McGrath	King Salmon
Temperature (°Celsius)	-22	-11	-20	-19	-13

- a) Bethel is colder than McKinley Park. c) King Salmon is colder than Bethel.
 b) Fairbanks is the coldest city. d) McKinley Park is the warmest city.

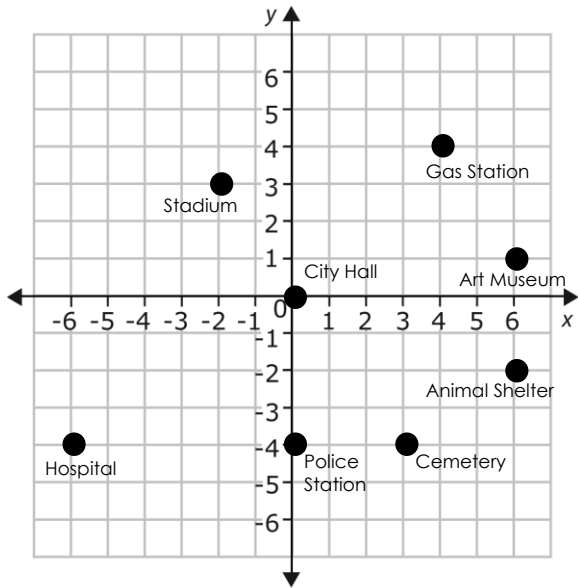
10) Which statement below is NOT true? 10) _____

- a) $-1 > -18$ b) $-2 > -4$ c) $-4 < 1$ d) $-13 > -4$

11) 45 Advanced Math 6 students reached the peak of Mathrocks Mountain at 5,300 feet above sea level. Then, they hiked down 4,000 feet to check out some ancient ruins. How many more feet must they hike to reach sea level? 11) _____

- a) -1,300 ft b) 1,300 ft c) 1,700 ft d) 9,300 ft

Use the map to answer questions 12-15. Each unit represents one block.



12) Which ordered pair represents the location of the police station? 12) _____

- a) (0, -4) b) (-4, 0) c) (0, 4) d) (1, -4)

13) How many blocks apart are the cemetery and the hospital? 13) _____

- a) -9 b) 6 c) 9 d) 10

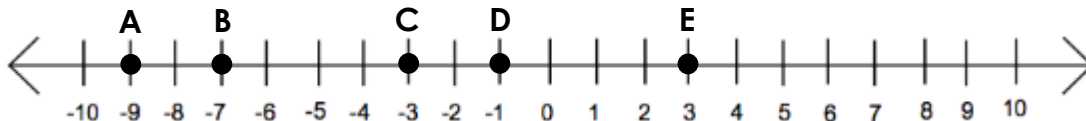
14) Which building is located in quadrant IV? 14) _____

- a) hospital b) cemetery
c) stadium d) police station

15) Which building is located at the origin? 15) _____

- a) city hall b) art museum
c) gas station d) police station

Use the number line for questions 16-17.



16) Which point is represented by -7? 16) _____

- a) A b) B c) C d) E

17) Which integer represents the **opposite** of Point E in the number line? 17) _____

- a) -3 b) -2 c) 2 d) 7

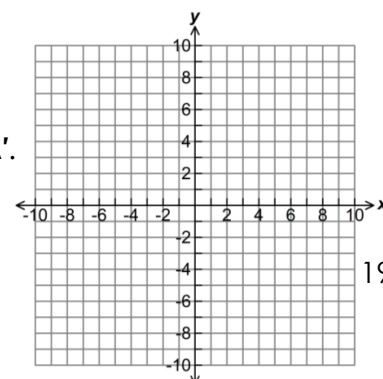
Use the coordinate plane for questions 18-19.

18a) **Graph** and **Label** point **A** (-3, 2) on the coordinate plane.

18b) **Reflect** the point across the **y-axis**, and label that point **A'**.

19) What is the distance between **A** and **A'**?

- a) -6 b) 2 c) 5 d) 6



19) _____

20) The ordered pairs $(8, 2)$, $(-4, 2)$ and $(-4, 5)$ are 3 vertices of a rectangle. Which ordered pair is the 4th vertex? 20) _____

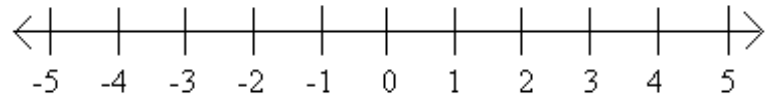
- a) $(8, -4)$ b) $(5, 8)$ c) $(8, 5)$ d) $(2, 5)$

21) Use the number line below to plot the following points:

Point A: Ariana found \$3.50

Point B: The opposite of 5

Point C: Kodou owes $2\frac{1}{2}$ dollars



22) If you reflect the point $(-10, -5)$ across the x-axis, what would be the coordinates of the reflection? 22) _____

- a) $(10, -5)$ b) $(10, 5)$ c) $(-10, 5)$ d) $(-10, -5)$

23) Which statement best describes $|-24|$? 23) _____

- a) the distance from -24 to 24 on a number line
 b) the distance from -2 to 4 on a number line
 c) the distance from 0 to -24 on a number line
 d) the distance from -2 to -4 on a number line

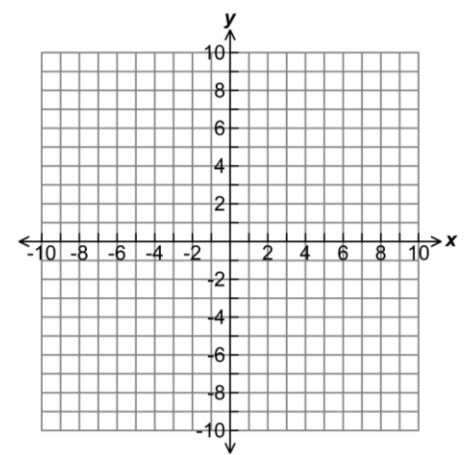
24) Graph and label the following points on the coordinate plane.

Point A: $(-10, 0)$

Point B: $(9, 1)$

Point C: $(-2, -3)$

Point D: $(4, -5)$



Use the coordinate plane for questions 25-27.

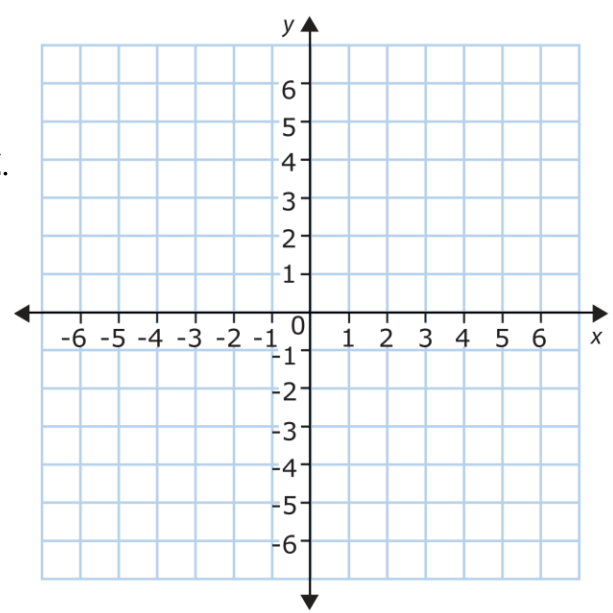
25) Graph $(5, -3)$ and label it **K**.
 Graph $(5, 5)$ and label it **A**.
 Reflect both points across the y-axis and label them **T** & **Z**.
 Connect the points to create a polygon.

26) **Circle** the **perimeter** of the rectangle formed?

- a) 18 units b) 30 units
 c) 36 units d) 80 units

27) What is the **area** of the rectangle formed?

- a) 18 units² b) 30 units²
 c) 36 units² d) 80 units²



CONSTRUCTED RESPONSE

The coordinate grid below shows the locations of three different stores. Jamie's house is located at the origin. Use this coordinate plane to answer questions #28-33.

28) What are the coordinates of Point S? _____ Point P? _____

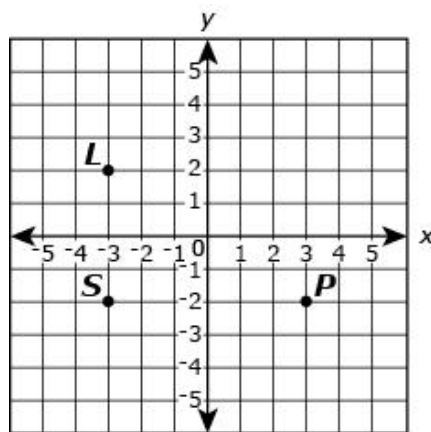
29) Describe the relationship between these two points.

30) If **Store S** is located 30 miles from **Store P**, what is the distance from **Store S** to **Store L**? _____

31) Show your work or explain how you got your answer to question #30.

32) Jamie's dad drove from **Store L** to **Store S** in 40 minutes. How long would it take him to drive from **S** to **P** at this rate? _____

33) Explain how you got your answer for question #32.



THROWBACK/BONUS:

1) In a recent poll, 40 out of every 50 students said math is their favorite subject! At this rate, how many of the 425 6th-graders say math is their favorite subject?

2) Simplify the expression: $3(2x + 4) + 6x + 3$