Coordinate Geometry

NTI: Day #3 (B)

Question 1 .

The vertices of a rectangle are listed below.

$P(2, 3)$, $Q(4, -2)$, $R(-11, -8)$, $S(-13, -3)$

What is the area of the rectangle?

A. 43.1 square units

B. 43.5 square units

C. 174 square units

D. 87 square units

Question 2 .

The vertices of a quadrilateral are listed below.

$A(4 , -1)$, $B(7 , -1)$, $C(12 , -4)$, $D(4 , -4)$

Which of the following is the strongest classification that identifies this quadrilateral?

A. The quadrilateral is a rectangle.

B. The quadrilateral is a rhombus.

C. The quadrilateral is a square.

D. The quadrilateral is a trapezoid.

Question 3 .

The vertices of a triangle are listed below.

$E(7,5)$, $F(12,2)$, $G(7,-4)$

Which of the following correctly classifies the triangle?

A. The triangle is an obtuse scalene triangle.

B. The triangle is an acute equilateral triangle.

C. The triangle is an acute scalene triangle.

D. The triangle is a right isosceles triangle.

Question 4 .

The vertices of a triangle are listed below.

$A(-1,3)$, $B(-9,-3)$, $C(-1,-9)$

Which of the following correctly classifies the triangle?

A. The triangle is an obtuse isosceles triangle.

B. The triangle is an acute isosceles triangle.

C. The triangle is an acute scalene triangle.

D. The triangle is a right scalene triangle.

Question 5 .

The vertices of hexagon PQRSTU are listed below.

$$P(7,6),\ Q(8,5),\ R(8,2),\ S(7,1),\ T(6,2),\ U(6,5)$$

What is the approximate perimeter of the hexagon?

- **A.** 11.66 units
- **B.** 5.83 units
- **C.** 10.24 units
- **D.** 23.31 units

Question 6 .

The vertices of a triangle are listed below.

$E(-1, 2)$, $F(-5, -1)$, $G(-1, -4)$

What is the area of the triangle?

- **A.** 6 square units
- **B.** 24 square units
- **C.** 16 square units
- **D.** 12 square units

Question 7 .

The vertices of rectangle WXYZ are listed below.

$$W(4,9),\ X(7,6),\ Y(-2,-3),\ Z(-5,0)$$

What is the approximate perimeter of rectangle WXYZ?

- **A.** 50.91 units
- **B.** 16.97 units
- **C.** 54 units
- **D.** 33.94 units

Question 8 .

During recess, three friends decided to play a game of catch in a field. If their locations on the field are drawn on a coordinate plane, where the *x*- and *y*-values represent the length, in feet, the friends' locations are as follows.

Kylie is located at (2, 6).
Jackson is located at (10, -2).
Hailey is located at (2, -10).

What is the area of the field between the three friends?

- **A.** 64 square feet
- **B.** $(16\sqrt{2} + 16)$ square feet
- **C.** $128\sqrt{2}$ square feet
- **D.** 128 square feet

Question 9 .

The vertices of a triangle are listed below.

$H(3, 4)$, $I(6, 2)$, $J(3, -2)$

What is the area of the triangle?

A. 14.6 square units

B. 4.5 square units

C. 9 square units

D. 18 square units

Question 10 .

The vertices of a rectangle are listed below.

$I(5, 8)$, $J(5, -1)$, $K(-7, -1)$, $L(-7, 8)$

What is the area of the rectangle?

A. 108 square units

B. 42 square units

C. 432 square units

D. 216 square units

Question 11 .

The vertices of a quadrilateral are listed below.

$L(2 , 3)$, $M(9 , -4)$, $N(2 , -11)$, $O(-5 , -4)$

Which of the following is the strongest classification that identifies this quadrilateral?

A. The quadrilateral is a trapezoid.

B. The quadrilateral is a rhombus.

C. The quadrilateral is a rectangle.

D. The quadrilateral is a square.

Question 12 .

The vertices of triangle PQR are listed below.

$P(-7,5)$, $Q(-15,-1)$, $R(-7,-7)$

What is the perimeter of triangle *PQR*?

A. 32 units

B. 22 units

C. 60 units

D. 48 units

Question 13 .

The vertices of quadrilateral WXYZ are listed below.

$$W(8,-5),\ X(14,-5),\ Y(16,-10),\ Z(8,-10)$$

What is the approximate perimeter of the quadrilateral?

- **A.** 32.31 units
- **B.** 24.39 units
- **C.** 12.20 units
- **D.** 19.39 units

Question 14 .

The vertices of a triangle are listed below.

$$W(8,8),\ X(1,-1),\ Y(-1,2)$$

Which of the following correctly classifies the triangle?

- **A.** The triangle is an obtuse scalene triangle.
- **B.** The triangle is a right scalene triangle.
- **C.** The triangle is a right isosceles triangle.
- **D.** The triangle is an acute isosceles triangle.

Question 15 .

The vertices of a triangle are listed below.

$$L(3,4),\ M(10,-3),\ N(3,-10)$$

Which of the following correctly classifies the triangle?

- **A.** The triangle is an acute equilateral triangle.
- **B.** The triangle is a right scalene triangle.
- **C.** The triangle is an acute isosceles triangle.
- **D.** The triangle is a right isosceles triangle.

Question 16 .

The vertices of quadrilateral LMNO are listed below.

$$L(6,6),\ M(13,-1),\ N(6,-8),\ O(-1,-1)$$

What is the approximate perimeter of the quadrilateral?

- **A.** 98.01 units
- **B.** 29.7 units
- **C.** 39.6 units
- **D.** 19.8 units

Question 17 .

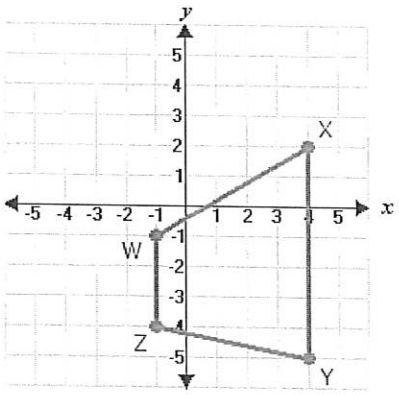
Directions: Type the correct answer in each box. Use numerals instead of words. If necessary, use / for the fraction bar.

Quadrilateral ABCD is a parallelogram. Given this, fill in the coordinates below.

$A(3,2)$, $B(5,4)$, $C(10,5)$, and $D($ ☐ , ☐ $)$

Question 18 .

What is the most specific name for figure WXYZ?



A. rectangle

B. kite

C. parallelogram

D. trapezoid

Question 19 .

Jason is camping at a state park and must set up his tent in a given rectangular section. His tent has five corners that must be secured into the ground with stakes. Suppose the locations of the stakes are plotted on a coordinate plane, where the *x*- and *y*-values represent the position, in inches, from the southwest corner of his rectangular section, which is located at (0, 0). The locations of the stakes are as follows.

Stake J is located at (26, 78).
Stake K is located at (78, 130).
Stake L is located at (130, 78).
Stake M is located at (104, 26).
Stake N is located at (52, 26).

What is the approximate perimeter of the base of his tent?

A. 1,077 inches

B. 208 inches

C. 315 inches

D. 257 inches

Question 20 .

Directions: Type the correct answer in the box. Use numerals instead of words.

Triangle ABC is defined by the points $A(-2,1)$, $B(1,3)$, and $C(5,-1)$.

The area of triangle ABC, rounded to the nearest hundredth, is ☐ square units.