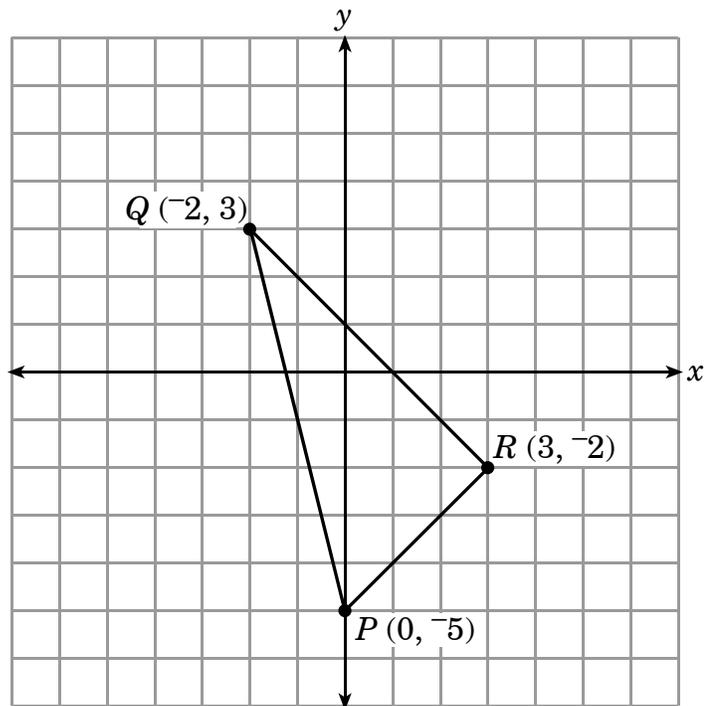


1. What is the area of a square with vertices $(3, 3)$, $(6, 6)$, $(9, 3)$, and $(6, 0)$?
- A $3\sqrt{2}$ units²
- B $12\sqrt{2}$ units²
- C 18 units²
- D 36 units²
2. On a map's coordinate grid, Panthersville is located at $(-3, 2)$, and Heel City is located at $(4, 8)$. Falconton is the midpoint between Panthersville and Heel City. What is the **approximate** distance from Panthersville to Falconton? (One map unit equals one mile.)
- A 3.25 miles
- B 4.61 miles
- C 5.00 miles
- D 9.22 miles

3. What is the perimeter of $\triangle PQR$?



- A $\sqrt{136}$
- B $10\sqrt{21}$
- C $2\sqrt{5} + 2\sqrt{3} + 17\sqrt{2}$
- D $8\sqrt{2} + 2\sqrt{17}$

4. Given points $P(7, 5)$, $Q(8, 3)$, $R(0, -1)$, and $S(-1, 1)$, which statement is true?
- A \overline{PQ} is parallel to \overline{RS} .
- B \overline{PQ} is perpendicular to \overline{RS} .
- C \overline{PR} is perpendicular to \overline{QS} .
- D \overline{PR} is parallel to \overline{QS} .
5. Line segment RS is perpendicular to line segment PQ , and the coordinates are $R(4, -5)$, $S(-8, 4)$, $P(0, 6)$, and $Q(-3, y)$. What is the value of y ?
- A 9
- B 8.25
- C 2
- D $\frac{2}{3}$
6. The equation of the line containing one side of a parallelogram is $3x + 2y = 8$. The opposite side contains the point $(0, -7)$. Which is the equation of the line that contains the opposite side?
- A $y = \frac{2}{3}x - 7$
- B $y = -\frac{3}{2}x + 7$
- C $y = \frac{2}{3}x + 7$
- D $y = -\frac{3}{2}x - 7$
7. Which of the following is an equation of the line perpendicular to $3x + 6y = 12$ and passing through $(4, 0)$?
- A $y = -\frac{1}{2}x + 2$
- B $y = \frac{1}{2}x - 2$
- C $y = -2x + 8$
- D $y = 2x - 8$

8. The line passing through points $(x, 4)$ and $(4, -5)$ is perpendicular to a line with a slope of $-\frac{7}{3}$. What is the value of x ?
- A -17
- B $\frac{1}{7}$
- C $\frac{55}{7}$
- D 25

End of Goal 2 Sample Items

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