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| **G. 3 Polygons on a Coordinate Plane Mastery Connect** |

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| **1.** | A triangle has vertices at (2, –2), (2, 3), and (6,–2). What is the area of the triangle? |
|  | |  |  | | --- | --- | | A. | 9 units2 | |
|  | |  |  | | --- | --- | | B. | 10 units2 | |
|  | |  |  | | --- | --- | | C. | 18 units2 | |
|  | |  |  | | --- | --- | | D. | 20 units2 | |
|  |  |
| **2.** | Rectangle JKLM has vertices at the coordinates J(–3, 3), K(4, 3) and  L(4, –3). What are the coordinates of the vertex at point M? |
|  | |  |  | | --- | --- | | **A.** | (–3, 4) | |
|  | |  |  | | --- | --- | | **B.** | (–4, 3) | |
|  | |  |  | | --- | --- | | **C.** | (–3, –3) | |
|  | |  |  | | --- | --- | | **D.** | (3, –3) | |
|  |  |
| **3.** | Triangle PQR has vertices at coordinates P(2, 4), Q(1, –1), and R(3, –1). What is the area of triangle PQR? |
|  | |  |  | | --- | --- | | A. | 5 units2 | |
|  | |  |  | | --- | --- | | B. | 7 units2 | |
|  | |  |  | | --- | --- | | C. | 8 units2 | |
|  | |  |  | | --- | --- | | D. | 10 units2 | |
|  |  |
| **4.** | What polygon is formed by the coordinates (–2, 3), (2, 3), (2, 0), and  (–2, 0)? |
|  | |  |  | | --- | --- | | A. | rectangle | |
|  | |  |  | | --- | --- | | B. | square | |
|  | |  |  | | --- | --- | | C. | trapezoid | |
|  |  |
| **5.** | Seth plotted the coordinates (1, 1), (1, 5), (5, 1), and (5, 5) on a coordinate plane. He connected each point in that order. He drew an additional line connecting (1, 1) and (5, 5). Which shapes did he draw? |
|  | |  |  | | --- | --- | | A. | a square and a rectangle | |
|  | |  |  | | --- | --- | | B. | a rectangle and a triangle | |
|  | |  |  | | --- | --- | | C. | two triangles | |
|  | |  |  | | --- | --- | | D. | two rectangles | |
|  |  |
| **6.** | What is the perimeter of a rectangle with vertices (–4, 3), (3, 3), (3, –2), and (–4, –2)? |
|  | |  |  | | --- | --- | | A. | 12 units | |
|  | |  |  | | --- | --- | | B. | 17 units | |
|  | |  |  | | --- | --- | | C. | 24 units | |
|  | |  |  | | --- | --- | | D. | 35 units | |
|  |  |
| **7.** | Rectangle WXYZ has vertices at W(3, 1), X(3, –4), Y(–5, –4), and  Z(–5, 1). What is the perimeter of rectangle WXYZ? |
|  | |  |  | | --- | --- | | A. | 22 units | |
|  | |  |  | | --- | --- | | B. | 26 units | |
|  | |  |  | | --- | --- | | C. | 40 units | |
|  |  |
| **8.** | Triangle QRS has the coordinates Q(–1, 1), R(4, 1), and S(2, –5). What is the area of triangle QRS? |
|  | |  |  | | --- | --- | | A. | 15 units2 | |
|  | |  |  | | --- | --- | | B. | 18 units2 | |
|  | |  |  | | --- | --- | | C. | 25 units2 | |
|  | |  |  | | --- | --- | | D. | 30 units2 | |
|  |  |
| **9.** | Point N, located at (–6,0), is added to the triangle below to form rectangle KLMN.  What is the area of rectangle KLMN? |
|  | |  |  | | --- | --- | | A. | 12 units2 |   29727 |
|  | |  |  | | --- | --- | | B. | 16 units2 | |
|  | |  |  | | --- | --- | | C. | 20 units2 | |
|  | |  |  | | --- | --- | | D. | 24 units2 | |
|  |  |
| **10.** | The coordinates of three of the vertices of a rectangle are (–2, 4), (–2, –2), (3, 4). What are the coordinates of the fourth vertex of the rectangle? |
|  | |  |  | | --- | --- | | A. | (3, –2) | |
|  | |  |  | | --- | --- | | B. | (2, –3) | |
|  | |  |  | | --- | --- | | C. | (–2, 3) | |
|  | |  |  | | --- | --- | | D. | (–3, 2) | |
|  |  |