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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?  |
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|  |  |
| --- | --- |
| A. | 9 units2  |

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|  |  |
| --- | --- |
| B. | 10 units2  |

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|   |

|  |  |
| --- | --- |
| C. | 18 units2  |

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|   |

|  |  |
| --- | --- |
| D. | 20 units2  |

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|   |   |
| **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?  |
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| **A.** | (–3, 4)  |

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| --- | --- |
| **B.** | (–4, 3)  |

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|  |  |
| --- | --- |
| **C.** | (–3, –3)  |

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| --- | --- |
| **D.** | (3, –3)  |

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| **3.** | Triangle PQR has vertices at coordinates P(2, 4), Q(1, –1), and R(3, –1). What is the area of triangle PQR?  |
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| --- | --- |
| A. | 5 units2  |

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|  |  |
| --- | --- |
| B. | 7 units2  |

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|  |  |
| --- | --- |
| C. | 8 units2  |

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|   |

|  |  |
| --- | --- |
| D. | 10 units2  |

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|   |   |
| **4.** | What polygon is formed by the coordinates (–2, 3), (2, 3), (2, 0), and (–2, 0)?  |
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|  |  |
| --- | --- |
| A. | rectangle  |

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|  |  |
| --- | --- |
| B. | square  |

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| --- | --- |
| C. | trapezoid  |

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| **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?  |
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|  |  |
| --- | --- |
| A. | a square and a rectangle  |

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| --- | --- |
| B. | a rectangle and a triangle  |

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|  |  |
| --- | --- |
| C. | two triangles  |

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|  |  |
| --- | --- |
| D. | two rectangles  |

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| **6.** | What is the perimeter of a rectangle with vertices (–4, 3), (3, 3), (3, –2), and (–4, –2)?  |
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|  |  |
| --- | --- |
| A. | 12 units  |

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|  |  |
| --- | --- |
| B. | 17 units  |

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|  |  |
| --- | --- |
| C. | 24 units  |

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|  |  |
| --- | --- |
| D. | 35 units  |

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| **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?  |
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|  |  |
| --- | --- |
| A. | 22 units  |

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|  |  |
| --- | --- |
| B. | 26 units  |

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| --- | --- |
| C. | 40 units  |

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| **8.** | Triangle QRS has the coordinates Q(–1, 1), R(4, 1), and S(2, –5). What is the area of triangle QRS?  |
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|  |  |
| --- | --- |
| A. | 15 units2  |

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|   |

|  |  |
| --- | --- |
| B. | 18 units2  |

 |
|   |

|  |  |
| --- | --- |
| C. | 25 units2  |

 |
|   |

|  |  |
| --- | --- |
| D. | 30 units2  |

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|   |   |
| **9.** | Point N, located at (–6,0), is added to the triangle below to form rectangle KLMN. What is the area of rectangle KLMN?   |
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|  |  |
| --- | --- |
| A. | 12 units2  |

29727 |
|   |

|  |  |
| --- | --- |
| B. | 16 units2  |

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|   |

|  |  |
| --- | --- |
| C. | 20 units2  |

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|   |

|  |  |
| --- | --- |
| D. | 24 units2  |

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| **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?  |
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|  |  |
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| A. | (3, –2)  |

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|   |

|  |  |
| --- | --- |
| B. | (2, –3)  |

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|   |

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| --- | --- |
| C. | (–2, 3)  |

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|   |

|  |  |
| --- | --- |
| D. | (–3, 2)  |

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