**Multiple Choice**

|  |  |
| --- | --- |
| **1.** | What is the name of the missing polygon in this pattern?Dodecagon, decagon, octagon, -…, quadrilateral. |
|  | **a.)** heptagon | **b.)** pentagon |
|  | **c.)** triangle | **d.)** hexagon |

|  |  |
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| **2.** | Which figure is a counterexample to the following statement?A quadrilateral with one pair of parallel sides is a parallelogram. |
|  | **a.)** A right triangle has perpendicular sides. | **b.)** A trapezoid is not a parallelogram. |
|  | **c.)** A dart is not a parallelogram. | **d.)** A square is a rectangle. |

|  |  |
| --- | --- |
| **3.** | Which number is next in the sequence: $ 45, 90, 135, 180,………$  |
|  | **a.)** $ 225$ | **b.)** $ 200$ |
|  | **c.)** $135$ | **d.)** $ 245$ |

**4.** Use inductive reasoning. Make a conjecture about the next figure in the pattern. Then draw the figure

|  |  |
| --- | --- |
|  |   **1 2 3**  |
|  |  |

**5.** Write a rule for each number pattern, and find the next number.

|  |  |
| --- | --- |
|  | $$1, 2.5, 4, 5.5, …………….$$ |
|  |  |

**ANSWERS**

**Multiple Choice**

|  |  |
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|  |  |

**5. Write a rule for each number pattern, and find the next number.**

|  |  |
| --- | --- |
|  | $$1, 2.5, 4, 5.5, …………….$$ |
|  | Start with $ 1, $each number is obtained by adding $1.5$ to the previous number. $$1+1.5=2.5$$$$2.5+1.5=4$$$$4+1.5=5.5$$$$5.5+1.5=7$$The next number is $ 7$ |