**Multiple Choice**

|  |  |
| --- | --- |
| **1.** | **Find the next two numbers in the number pattern.** $ 2, 4, 8………$ |
|  | **a.)**  $ 24, 32$ | **b.)**  $ 10, 12$ |
|  | **c.)** $ 16, 32$ | **d.)**  $ 16, 48$ |

|  |  |
| --- | --- |
| **2.** | **The common ratio in the number pattern** $ \frac{1}{2}, \frac{1}{4}, \frac{1}{8}………$ **is:** |
|  | **a.)**  $2$ | **b.)**  $1$ |
|  | **c.)** $ \frac{1}{2}$ | **d.)**  $ \frac{1}{4}$ |

|  |  |
| --- | --- |
| **3.** | **The common difference in the number pattern** $-2, -5, -8………$ **is:** |
|  | **a.)** $3$ | **b.)** $-13$ |
|  | **c.)** $-10$ | **d.)** $-3$ |

**4. Find the rule for the following pattern.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | $$0, 5, 10,15,20,25,30……………$$ |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| $$n$$ | $$1$$ | $$2$$ | $$3$$ | $$4$$ | $$5$$ | $$6$$ | $$7$$ |
|  |  |  |  |  |  |  |  |
|  | $$0$$ | $$5$$ | $$10$$ | $$15$$ | $$20$$ | $$25$$ | $$30$$ |

$$ $$ |

**5. Fill in the missing numbers.**

|  |  |
| --- | --- |
|  | **The rule for the pattern shown is** $÷3.$$81,\\_\\_\\_\\_\\_\\_\\_, \\_\\_\\_\\_\\_\\_\\_\\_, \\_\\_\\_\\_\\_\\_\\_\\_, 1, \\_\\_\\_\\_\\_\\_……………..$ |
|  |  |

**ANSWERS**

**Multiple Choice**

|  |  |
| --- | --- |
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|  | **c.)** $ 16, 32$ | **d.)**  $ 16, 48$ |

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| **2.** | **The common ratio in the number pattern** $ \frac{1}{2}, \frac{1}{4}, \frac{1}{8}………$ **is:** |
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|  | **c.)** $ \frac{1}{2}$ | **d.)**  $ \frac{1}{4}$ |

|  |  |
| --- | --- |
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**4. Find the rule for the following pattern.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | $$0, 5, 10,15,20,25,30……………$$ |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| $$n$$ | $$1$$ | $$2$$ | $$3$$ | $$4$$ | $$5$$ | $$6$$ | $7$ |
| $$ 5n$$ | $$5$$ | $$10$$ | $$15$$ | $$20$$ | $$25$$ | $$30$$ | $$35$$ |
| $$5n-5$$ | $0$ | $5$ | $10$ | $15$ | $20$ | $25$ | $$30$$ |

$ \*5$$$ $$$ +5 +5 +5 +5 +5 +5$The difference between successive values is always 5, The rule is of the form $5 n-5$ |

**5. Fill in the missing numbers.**

|  |  |
| --- | --- |
|  | **The rule for the pattern shown is** $÷3.$$81,\\_\\_\\_\\_\\_\\_\\_, \\_\\_\\_\\_\\_\\_\\_\\_, \\_\\_\\_\\_\\_\\_\\_\\_, 1, \\_\\_\\_\\_\\_\\_……………..$ |
|  | $$81÷3=27$$$$27÷3=9$$$$ 9÷3=3$$$$ 3÷3=1$$$$ 1÷3=\frac{1}{3}$$$81,27, 9, 3, 1, \frac{1}{3}……………..$ |