**Name:**

**Block:**



**Exponent - Small Number, with Big Power!**

**Math 9 - Block C & D**

**Power & Exponent Law v1.0**

|  |  |
| --- | --- |
|  |  |
| Written | /35 |
| Total | /35 |

|  |
| --- |
| **Additional Instructions*** Remember to write your name on your test, in the top left corner where it says **Name:** and also write your name on the answer sheet(s) provided.
* All written questions are to be completed in the space provided in the exam booklet. Be sure to show any relevant work and circle your final answer.
* It’s dangerous to go alone...Take This
 |

1. About the power: $-3^{3}$, figure out which number is Base, and which number is Exponent (2 marks)
2. Fill in the Table (3 marks)

|  |  |  |
| --- | --- | --- |
| **Power** | **Repeated Multiplication** | **Standard Form** |
| 42 |  |  |
| -53 |  |  |
| (-5)3 |  |  |

1. Determine if the powers are positive or negative (2 marks)
2. $(-3)^{3}$ b. $-(-2025)^{2}$
3. Re-write Numbers below Using Scientific Notation (2 marks)
4. 34600 b. 5432
5. Re-write number with Powers of Ten (2 marks)
6. 64702 b. 30040
7. Simplify and evaluate the following expression (2 marks each)

$16-2^{3}$ $(2^{2})^{3}-3^{4} ÷3^{2}$

$-1- 1^{2025}+\left(-1\right)^{3}-1$ $10^{2} ×10 ÷\left(10^{4} ÷10^{3} ×10\right)-10$

 $2^{3} × 3^{2}+ (-3)^{3}- (-2)^{2}$ $[\left(-3\right)+ \left(-2\right)^{2}-3^{1}]$0 $+ (-1)^{0}-(-1)^{1}$

1. Simplify the following expression to the **simplest standard form** (2 marks each)

$(-3ab)^{2}$ $(-2a^{2}b)^{0}$

$(-4p^{2}qr)^{3}$ $-(\frac{3}{4})^{3}$

$\frac{6a^{2}}{8ab}$ $\frac{8a^{2}bc^{3}}{10ab^{2}}$