Grade 9 Math

MID-TERM EXAM PREPARATION

CHAPTER 2 – POWERS AND EXPONENT LAWS

1. Label the diagram.



2. Fill in the blanks.

A power with an integer base and exponent 2 is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A power with an integer base and exponent 3 is a

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Fill in the chart.

|  |  |  |
| --- | --- | --- |
| Repeated multiplication | As a power | Standard Form |
| 6 x 6 x 6 x 6 x 6 |  |  |
|  | (-3)3 |  |
|  |  | -64 |
| -(-10)(-10)(-10)(-10) |  |  |

4. Predict whether each answer is positive or negative, then evaluate.

a) (-2)3 b) -21 c) (-4)0 d) 51

5. Write each number as a power with base 2.

a) 4 b) 16 c) 64

d) 256 e) 32 f) 128

6. Evaluate each power of 10.

a) 102 b) -106 c) (-10)0

7. Fill in the chart.

|  |  |
| --- | --- |
| Standard Form | As powers of 10 |
| 23, 409 |  |
|  | (4 x 107) + (5 x 104) +(3 x 103)+ (3 x 101) |
| 3,210 |  |

8. Evaluate.



9. Use a calculator to evaluate.



10. Write each as a single power.



11. Evaluate

.

12. Simplify by applying your exponent laws and then evaluate.





13. A wheat field is 10 000 m wide. The area of the field is 108 m2.

**a)** Use the exponent laws to determine the length of the field.

**b)** What is the perimeter of the field? Did you use any exponent laws to calculate the perimeter? Explain.

14. TRY THESE HARDER ONES!!!



