Unit 2.1 – 2.3 Check

Name: _____

1. Complete this table.

Power	Base	Exponent	Repeated Multiplication	Standard Form
5^3	5	3	$5 \times 5 \times 5$	125
$(-3)^3$	(-3)	3	$(-3)(-3)(-3)$	-27
-4^2	4	2	$-(4 \times 4)$	-16
-2^5	2	5	$-(2 \times 2 \times 2 \times 2 \times 2)$	-32
$-(-6)^3$	(-6)	3	$-(-6)(-6)(-6)$	216
11^0	11	0		1
-7^0	7	0		-1
-125^0	125	0		-1
$(-4)^0$	(-4)	0		1

2. Evaluate each expression. Show all steps.

a) $2^2 - 2^3$

$= 4 - 8$

$= -4$

b) $-5 + 2^5 - [4 - 3 \times (-2)]$

$= -5 + 2^5 - [4 - (-6)]$

$= -5 + 32 - (10)$

$= 27 - 10$

$= 17$

c) $-4^0 + 2(3^0 + 2^2)$

$= -4^0 + 2(1 + 4)$

$= -4^0 + 2(5)$

$= -1 + 10$

$= 9$

3. Evaluate each expression. Show all steps.

a. $\frac{-3^2+5}{4^0-2^0-(-6)^0}$

$= \frac{-9+5}{1-1-1}$

$= \frac{-4}{-1}$

$= 4$

b. $-5^2-(7^0+5^2-3^3)^7$

$= -5^2-(1+25-27)^7$

$= -25-(-1)^7$

$= -25-(-1)$

$= -24$

4. Find and correct the error.

$$(-3^2+17^3)^0-2\left(-3\times(-2)\right)^2$$
$$= 1-2(-3\times(-2))^2$$
$$= 1-2(-6)^2$$
$$= 1-2(36)$$
$$= -1(36)$$
$$= -36$$

this should be $(-3)\times(-2) = +6$

they should have multiplied before subtraction.

$= 1-2(+6)^2$

$= 1-2(36)$

$= 1-72$

$= -71$

5. **Bonus!**

Where do the brackets need to be placed to make the equation true? Show your workings.

$$-5+2\times(3^2-4)=5$$