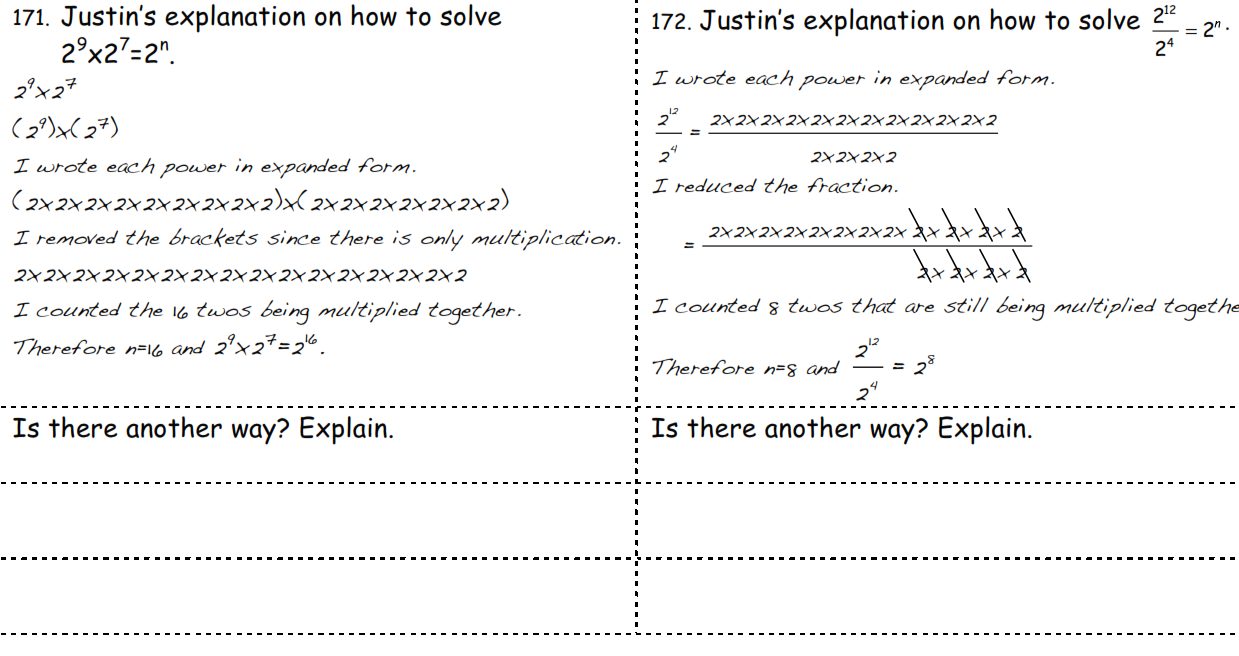
**Exponent Laws** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Math 9** Day \_\_\_\_ Period \_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Fill in the table.**

|  |  |  |
| --- | --- | --- |
|  | **Expanded form** | **Exponential form** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Karen’s explanation on how to solve Karen’s explanation on how to solve



**EXPONENT LAW 1** xmxn = xm+n

**EXPONENT LAW 2** xm/xn = xm-n

Putting exponent laws 1 and 2 together:

**The ONE and ZERO exponents:**

What does mean?

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

The table shows decreasing powers of 10.

|  |  |  |
| --- | --- | --- |
| Number in words | Standard form | Exponential form (power) |
| One million | 1 000 000 |  |
| One hundred thousand | 100 000 |  |
| Ten thousand | 10 000 |  |
| One thousand | 1 000 |  |
| One hundred | 100 |  |
| Ten | 10 |  |
| **One** | **1** |  |

Use your patterning skills to complete the patterns below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Standard form | Exponential form |  | Standard form | Exponential form |
| 16 |  |  |  |  |
| 8 |  |  |  |  |
| 4 |  |  |  |  |
| 2 |  |  |  |  |
| 1 |  |  |  |  |

Write in expanded form:

=

**EXPONENT LAW 3** (xm)n = xmn

**In-class practice:**

**Separate piece of paper. Write out question and show work below question.**

**c)**

**e) f)**

**h) i)**

**k) l)**

**n)**

**o)**

**Homework: Page 106 # 5 to 11**