Warm Up

Warm Up Answers

$$\frac{168}{6)1008}$$

$$\frac{331}{2)662}$$

Homework Answers

Good weekend?

Lesson 1.2

September 8, 9,7, & 12, 2016



Lesson 1.2

September 8, 9,7, & 12, 2016

Lesson Objective:

Students will be able to:

use formal language to describe a power and look at the specific case of perfect squares.

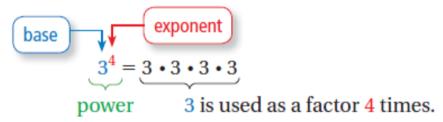
Self-Evaluation Scale

Score	Description
4	I can teach other students how to use formal language to describe a power and look at the specific case of perfect squares.
3	I can use formal language to describe a power and look at the specific case of perfect squares.
2	I recognize, but still need help to use formal language to describe a power and look at the specific case of perfect squares.
1	I do not know how to use formal language to describe a power and look at the specific case of perfect squares.

Activity 1, 2, & 3

With a partner, work on Activity I, 2, & 3 on pages I0, II, & I2 of your Big Ideas Text Book.

A **power** is a product of repeated factors. The **base** of a power is the repeated factor. The **exponent** of a power indicates the number of times the base is used as a factor.



Power	Words
3^2	Three squared, or three to the second
3 ³	Three <i>cubed</i> , or three to the third
3^{4}	Three to the fourth

1 Writing Expressions as Powers

Write each product as a power.

Because 4 is used as a factor 5 times, its exponent is 5.

So,
$$4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 = 4^5$$
.

b.
$$12 \times 12 \times 12$$

Because 12 is used as a factor 3 times, its exponent is 3.

So,
$$12 \times 12 \times 12 = 12^3$$
.

On Your Own

Write the product as a power.

2.
$$15 \times 15 \times 15 \times 15$$

2 Finding Values of Powers

Find the value of each power.

a.
$$7^2$$

b.
$$5^3$$

$$7^2 = 7 \cdot 7$$
 Write as repeated multiplication.

$$5^3 = 5 \cdot 5 \cdot 5$$

$$= 49$$

$$= 125$$

The square of a whole number is a **perfect square**.

3 Identifying Perfect Squares

Determine whether each number is a perfect square.

- a. 64
 - Because $8^2 = 64$, 64 is a perfect square.
- **b.** 20

No whole number squared equals 20. So, 20 is not a perfect square.

On Your Own

Find the value of the power.

3. 6^3

- **4.** 9² **5.** 3⁴
- **6**. 18²

Determine whether the number is a perfect square.

7. 25

8. 2

9. 99

10. 100

Assignment

Complete problems 4, 5, I4, I5, 25, 26, 36, 37, & 38 on pages I4 & I5 in your Big Ideas Text Book.

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Homework

Worksheet I.I Practice B