

Diagnostic Test

8th grade week 6

Find each product.

1. $3 \cdot 3 \cdot 3$
2. $6 \cdot 6 \cdot 6 \cdot 6 \cdot 6$
3. $(9)(-5)(-5)(9)(-5)$
4. $7 \cdot 7 \cdot 2 \cdot 2 \cdot 2$
5. $5 \cdot 3 \cdot 5 \cdot 3 \cdot 3$

6. **BIRDS** A bird call manufacturer sold $8 \cdot 4 \cdot 4 \cdot 8 \cdot 4$ calls in two months. How many calls did the manufacturer sell?
7. **RIVER** The St. John's River is $2 \cdot 5 \cdot 31$ miles long. About how many miles long is the river?

Find the prime factorization of each number.

- | | |
|---------|---------|
| 8. -82 | 9. 38 |
| 10. 208 | 11. 11 |
| 12. 60 | 13. -78 |
| 14. 20 | 15. 124 |

16. **HEIGHT** The table shows the heights of four sixth grade students. Find the prime factorization of each height.

Student	Height (in.)
Oksana	59
Silvia	62
Joseph	64
Diego	66

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____

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Pretest

Write each expression using exponents.

1. $8 \cdot 8 \cdot 8$

1. _____

2. $4 \cdot 4 \cdot 4 \cdot 4$

2. _____

Evaluate each expression.

3. $(-5)^3$

3. _____

4. 3^6

4. _____

Simplify. Express using exponents.

5. $8^2 \cdot 8^4$

5. _____

6. $(7^3)^2$

6. _____

Write each expression using a positive exponent.

7. 9^{-4}

7. _____

8. 6^{-3}

8. _____

Write each number in standard form.

9. 3.68×10^4

9. _____

10. 7.924×10^{-5}

10. _____

Find each square root.

11. $-\sqrt{36}$

11. _____

12. $\sqrt{\frac{16}{25}}$

12. _____

Find each cube root.

13. $\sqrt[3]{27}$

13. _____

14. $\sqrt[3]{512}$

14. _____

Vocabulary Test

base	perfect cube	rational number
cube root	perfect square	repeating decimal
exponent	power	scientific notation
irrational number	radical sign	square root
monomial	real number	terminating decimal

Choose the correct term from the two choices given which makes the statement true.

1. In the expression 2^4 , 4 is called the (base, exponent). 1. _____
2. In the expression a^{-3} , a is called the (base, power). 2. _____
3. (Scientific notation, Square root) is a compact way of writing numbers with absolute values that are very large or very small. 3. _____
4. A (square root, perfect square) of a number is one of its two equal factors. 4. _____
5. A product of repeated factors can be expressed as a (base, power). 5. _____
6. A (radical sign, scientific notation), $\sqrt{\quad}$, is used to indicate a positive square root. 6. _____
7. Numbers such as 1, 4, 9, 16, and 25 are called (irrational numbers, perfect squares) because they are squares of integers. 7. _____
8. Numbers that are not rational are called (base, irrational) numbers. 8. _____

Define in your own words.

9. monomial 9. _____
10. real number 10. _____

Khan Academy Notes

Unit _____

Name _____

Date _____

Topic _____

Questions you may have????????????????

Name: _____ Date: _____

Song or Video Note-Taking Chart

Song Name: _____

Important word, term or event	Line from song that includes word, term or event	Definition of word/term or Explanation of event
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____
9. _____	_____	_____
10. _____	_____	_____