

# PRIME FACTORIZATION

## Cross-Number Puzzle

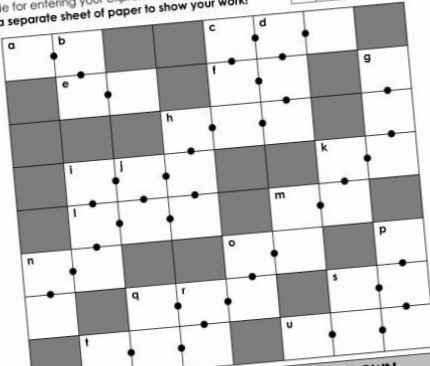
Name: \_\_\_\_\_ Per: \_\_\_\_\_  
Date: \_\_\_\_\_

Directions: Find the prime factorization of each number. Write your answers using exponents and list the bases from least to greatest. Use the example on the right as a guide for entering your expressions in the puzzle. Use a separate sheet of paper to show your work!

Example:  $2^2 \cdot 3 \cdot 11^2$

If Across:  $2^2 + 3 + 11^2$

If Down:  $\begin{array}{c} 2^2 \\ + \\ 3 \\ + \\ 11^2 \end{array}$



ACROSS		DOWN	
a. 54	b. 135		
c. 132	c. 60		
e. 245	d. 525		

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ACROSS		DOWN	
f. 75		g. 280	
h. 70		h. 182	
i. 504		i. 264	
k. 112		j. 63	
l. 273		k. 432	
m. 216		m. 200	
n. 176		n. 144	
o. 400		o. 80	
q. 180		p. 315	
r. 160		q. 100	
s. 500		r. 99	
t. 8		s. 96	

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Prime

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## CROSS NUMBER PUZZLE



# PRIME FACTORIZATION

## Cross-Number Puzzle

**Objective:** Students will practice finding the prime factorization of numbers with this fun and engaging Cross-Number Puzzle. **The given values range up to 550.**

**Directions:**

This activity is similar to a crossword puzzle, but instead of filling in letters, students fill in numbers. There are both Across and Down problems. Students find the prime factorization of each number and record their answers in the puzzle accordingly. The puzzle is self-checking, allowing students to spot and correct errors if their answers do not fit.

There are 30 prime factorization problems included. While students can complete the activity independently, I recommend working in pairs or small groups due to the number of problems. If working in pairs, one partner can work on Across problems while the other works on the Down problems.

### PRIME FACTORIZATION

*Cross-Number Puzzle*

**Directions:** Find the prime factorization of each number. Write your answers using exponents and **list the bases from least to greatest**. Use the example on the right as a guide for entering your expressions in the puzzle. **Use a separate sheet of paper to show your work!**

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Per: \_\_\_\_\_

**Example:**  $2^2 \cdot 3 \cdot 11^2$

If Across:  $2^2 \cdot 3 \cdot 11^2$

If Down:  $\begin{matrix} 2^2 \\ 3 \\ 11^2 \end{matrix}$

ACROSS	DOWN
a. 54	b. 135
c. 132	c. 60
e. 245	d. 525

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