

MATH SKETCH NOTES

PRIME FACTORIZATION

12
Set 6

COMPOSITE

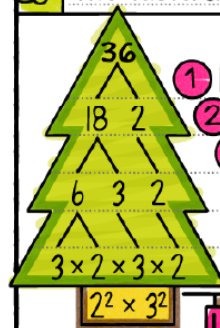
A **composite** number has more than two factors.

Every **composite** number is a product of **prime** numbers.

PRIME

A **prime** number is a number that has exactly two factors, 1 and the number itself.

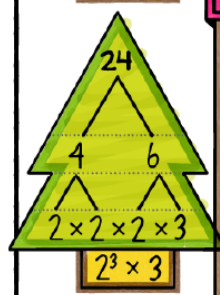
Prime numbers are the "building blocks" of **composite** numbers.



- 1 Draw two branches below the number.
- 2 Write two factors below these branches.
- 3 Bring down any **prime** factors.
- 4 Keep factoring until all numbers are **prime**.
- 5 Write as a product of the **prime** numbers.
- 6 Express repeated factors using exponents.

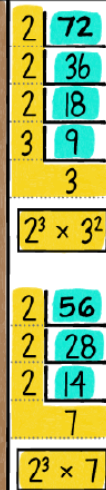
TREE METHOD

Prime factorization is a way to write a composite number as the product of **prime** factors.



LADDER METHOD

- 2 Write a **prime** factor on the outside and divide.
- 4 Keep dividing until all quotients are **prime**.
- 6 Use exponents for repeated factors. $2^3 \times 3^2$



- 1 Draw a "rung" & write the **composite** number inside.
- 3 Write the quotient below and draw another "rung."
- 5 Write the **prime** number expression $2 \times 2 \times 2 \times 3 \times 3$

GRADE 6

All factors on the outside of the ladder must be prime.

STEP-BY-STEP POWERPOINT

PRIME FACTORIZATION

12
sets

COMPOSITE

A composite number has more than two factors.

Every composite number is a product of prime numbers.

PRIME

A prime number is a number that has exactly two factors, 1 and the number itself.

Prime numbers are the 'building blocks' of composite numbers.

THE METHOD

Prime factorization is a way to write a number using only prime factors. A composite number can be written as the product of prime numbers. Prime factors are the prime numbers that multiply together to make the original number.

72
36
18
9
3

$2^3 \times 3^2$

56

28

14

7

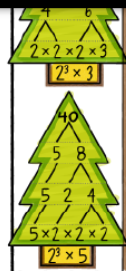
$2^3 \times 7$

1 Draw a "rung" & write the composite number inside.

2 Write the quotient below and draw another "rung."

3 Write the prime number expression
 $2 \times 2 \times 2 \times 3 \times 3$

Prime numbers are like "the atoms of math."



outside and divide.

4 Keep dividing until all quotients are prime.

5 Use exponents for repeated factors. $2^3 \times 3^2$

All factors on the outside of the ladder must be prime.

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MacBook Pro



PRIME FACTORIZATION 12 Set 6

COMPOSITE	PRIME
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TREE METHOD Prime factorization is a way to write a composite number as the product of prime numbers.

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4 Keep factoring until all numbers are prime.
5 Write as a product of the prime numbers.
6 Express repeated factors using exponents.

LADDER METHOD

2 72
2 36
2 18
2 9
3 3
3 3

36
18 2
6 3 2
3 x 2 x 3 x 2
2² x 3²

24
12 2
6 2 2
3 2 2 2
2³ x 3

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LADDER METHOD

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2 36
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3 x 2 x 3 x 2
2² x 3²

24
12 2
6 2 2
3 2 2 2
2³ x 3

2 SIZES: STANDARD US 8.5 × 11 & COMPOSITION NOTEBOOK



5 2 4
5 x 2 x 2 x 2
2³ x 5

factors. 2³ x 3²

All factors on the outside of the ladder must be prime.

Prime numbers are like "atoms of math".

5 x 2 x 2 x 2
2³ x 5

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PRIME

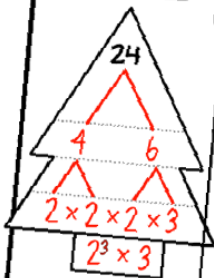
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Prime numbers are the "building blocks" of composite numbers.

TREE METHOD

Prime factorization is a way to write a composite number as the product of prime numbers.

- 1 Draw two branches below the number.
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- 6 Express repeated factors with exponents.



DETAILED ANSWER KEY

4 Keep dividing until all quotients are prime.

6 Use exponents for repeated factors. $2^3 \times 3^2$

All factors on the outside of the ladder must be prime.

2 | 56

2 | 28

2 | 14

7

$2^3 \times 7$

5 Write the prime number expression $2 \times 2 \times 2 \times 3 \times 3$

Prime numbers are like "the atoms of math."

MATH SKETCH NOTES

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These 6th-grade math sketch notes (AKA doodle pages) are a powerful learning and teaching tool. They cover essential math concepts and procedures for students in a visually appealing way. You can use this resource to supplement any math curriculum, and they are perfect for previewing/pre-teaching or reviewing/reinforcing.

These sketch pages are like mini anchor charts that your students actively create and can be referred to in the future.

WHAT'S INCLUDED:

- Blank student note page
(two sizes: 8.5 x 11 & composition notebook size for INBs)
- Detailed answer key
- Step-by-step PowerPoint

GUIDED NOTE-TAKING

Guiding your students through the note-taking process is so easy and requires almost zero preparation!

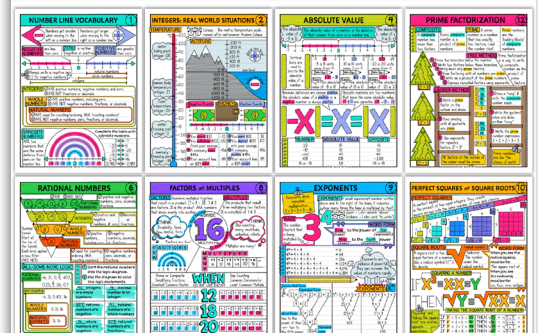
1. PowerPoint: Each sketch note page comes with a step-by-step PowerPoint that you can use to guide your students as they complete their notes.
2. Document Camera: Use a document camera to project a blank copy of the notes. Use the answer key provided to complete the note page in front of your students.

WHY SKETCH?

Sketch notes present your students with a meaningful and engaging activity they will love. Doodle note-taking activates verbal and visual modalities to capture concepts. The whole brain is absorbed in hearing, synthesizing, and retaining ideas. This high level of engagement helps students retain the content and leaves little room for distraction.

GET THE BUNDLE!!!

SIXTH GRADE MATH GUIDED SKETCH NOTES



GROWING BUNDLE