

1

How many prime numbers are there between 25 and 100?

- A) 13
- B) 14
- C) 15
- D) 16
- E) 18

6

Which expression gives the prime factorization of 504?

- A) $2^3 \cdot 3^2 \cdot 7$ spaceship
- B) $2^2 \cdot 3^3 \cdot 7$ blimp
- C) $2^3 \cdot 3^2 \cdot 7^2$ rollercoaster
- D) $2^2 \cdot 3^2 \cdot 7^2$ lighthouse
- E) $2^3 \cdot 3^3 \cdot 7$ photo booth

10

The following expression gives the prime factorization of 720. What is the sum of a, b, and c?

$$2^a \cdot b^2 \cdot c$$

- A) 9 wanted attention
- B) 10 were doing it for charity
- C) 11 did not know any better
- D) 12 are just cool like that
- E) 13 wanted to be popular

© Gina Wilson (All Things Algebra®), LLC, 2023

Primes, Composites, & PRIME FACTORIZATION

MATH LIB ACTIVITY



PRIMES, COMPOSITES, & Prime Factorization

"Math Lib" Activity!

Objective: To practice identifying prime numbers, composite numbers, and the prime factorization of a number with this "Math Lib" Activity.

Activity Directions: Print and post the ten stations around the room. Give each student the worksheet to record their work as they travel to the stations. Group students (I typically do groups of 3) and assign to a starting problem. Set the timer for 2-3 minutes (more if needed). Students solve the problem at the station, recording their work on their recording worksheet. They look for their answer and record the piece to the story on the math lib. When the timer goes off, they move to the next station.

You can edit each slide to change the teacher names and all story elements to personalize for your students. PowerPoint is required to edit the slides. They enjoy seeing which one of their teachers is the "star" of the story!

Station 1: How many prime numbers are there between 25 and 100?
A) 13
B) 14
C) 15
D) 16

Station 6: Which expression gives the prime factorization of 504?
A) 2×7
B) $2 \times 3^2 \times 7$
C) $2 \times 3^2 \times 5$
D) $2 \times 3^3 \times 11$
E) 2^7

Station 10: The following expression gives the prime factorization of 720. What is the sum of a, b, and c?
 $2^a \cdot b^2 \cdot c$
A) 9
B) 10
C) 11
D) 12
E) 13

PRIME & COMPOSITE NUMBERS "Math Lib"
Directions: Solve the problem at each station. Identify the answer and fill in the blanks on the back to complete the story.

STORY TEMPLATE:
I _____ was _____ with _____
to let _____ with _____
(4) _____ on (5) _____
in a (6) _____ in (7) _____ while _____

10 Stations & Student Worksheet
(All story elements are editable!)