MathVine - Pre-Algebra Name_____

Prime Factorization Date_____ Period_____

Write the prime factorization of the given number.

1) 10

2) 56

3) 22

4) 92

5) 24

6) 82

7) 85

8) 100

9) 34

Prime Factorization Date_____ Period_____

Write the prime factorization of the given number.

1) 10

Answer: $2 * 5$

2) 56

Answer: $2 * 2 * 2 * 7$

3) 22

Answer: $2 * 11$

4) 92

Answer: $2 * 2 * 23$

5) 24

Answer: $2 * 2 * 2 * 3$

6) 82

Answer: $2 * 41$

7) 85

Answer: $5 * 17$

8) 100

Answer: $2 * 2 * 5 * 5$

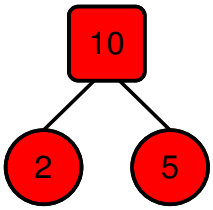
9) 34

Answer: $2 * 17$

Prime Factorization Date_____ Period_____

Solution Steps

1) 10

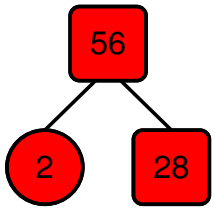


$10 = 2 * 5$

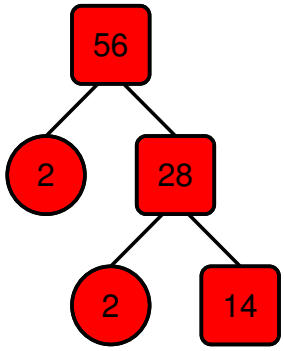
The prime factorization of 10 can be written as:

$2^{1} * 5^{1}$

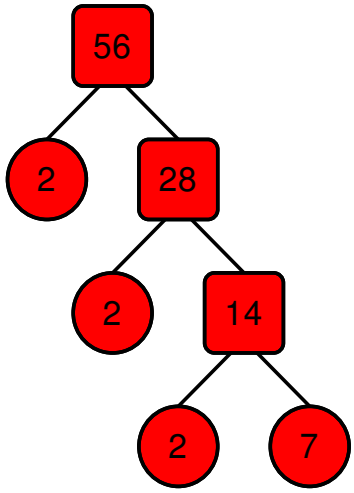
2) 56



$56 = 2 * 28$



$28 = 2 * 14$

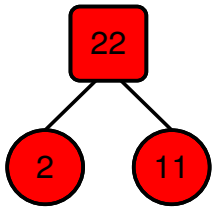


$14 = 2 * 7$

The prime factorization of 56 can be written as:

$2^{3} * 7^{1}$

3) 22

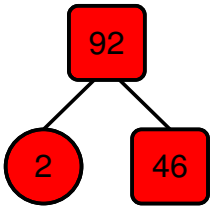


$22 = 2 * 11$

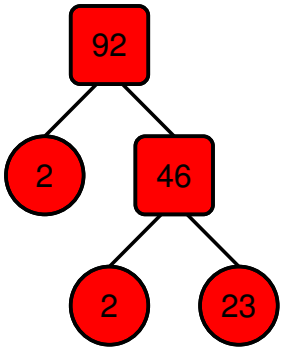
The prime factorization of 22 can be written as:

$2^{1} * (11)^{1}$

4) 92



$92 = 2 * 46$

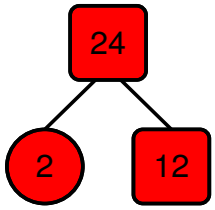


$46 = 2 * 23$

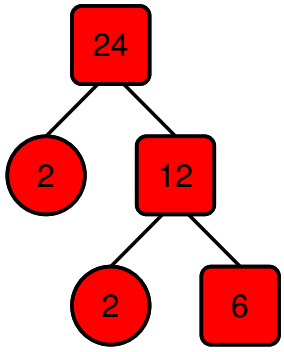
The prime factorization of 92 can be written as:

$2^{2} * (23)^{1}$

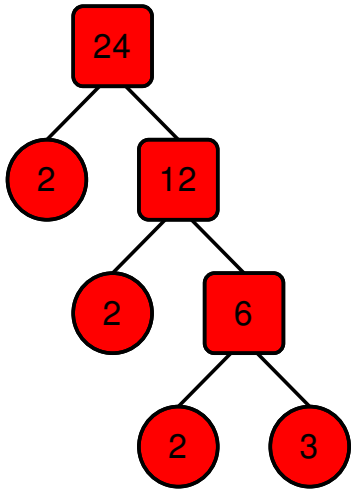
5) 24



$24 = 2 * 12$



$12 = 2 * 6$

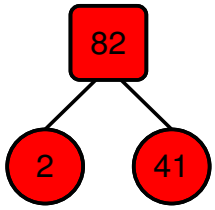


$6 = 2 * 3$

The prime factorization of 24 can be written as:

$2^{3} * 3^{1}$

6) 82

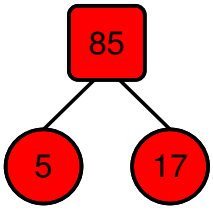


$82 = 2 * 41$

The prime factorization of 82 can be written as:

$2^{1} * (41)^{1}$

7) 85

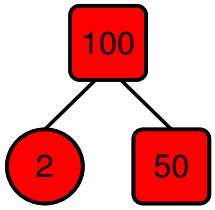


$85 = 5 * 17$

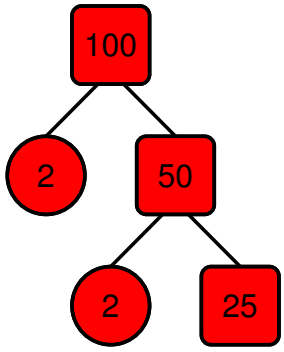
The prime factorization of 85 can be written as:

$5^{1} * (17)^{1}$

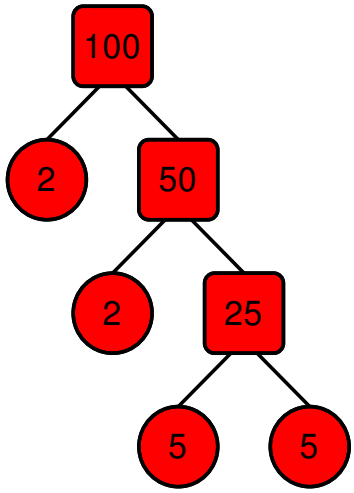
8) 100



$100 = 2 * 50$



$50 = 2 * 25$

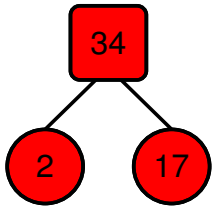


$25 = 5 * 5$

The prime factorization of 100 can be written as:

$2^{2} * 5^{2}$

9) 34



$34 = 2 * 17$

The prime factorization of 34 can be written as:

$2^{1} * (17)^{1}$