

4-2 / Prime Factorization

2, 3, 5, 7, 11

- Expresses a # as a product of its factors.

^
Prime #

1.) \div by least prime #?

Is it divisible by 2 ?

2.) Start over

3.) Stop with prime #.

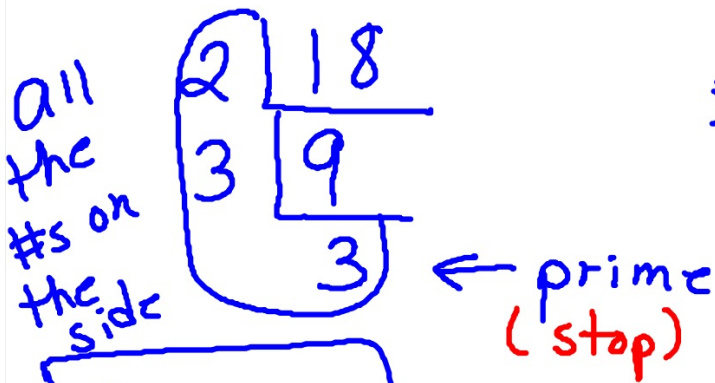
$$\begin{array}{r} 37 \\ 2 \overline{) 74} \\ \underline{-61} \\ 14 \\ \underline{14} \\ 0 \end{array}$$

← prime (stop)

$$\boxed{2 \cdot 37}$$

2, 3, 5, 7, 11

* Only divide
by prime #s.



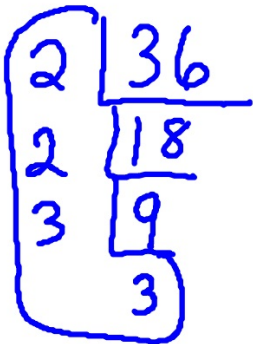
$$2 \cdot 3 \cdot 3$$

or

$$2 \cdot 3^2$$

Answer is written from
least to greatest.

2, 3, 5, 7, 11



$$\begin{array}{l} 2 \cdot 2 \cdot 3 \cdot 3 \\ 2^2 \cdot 3^2 \end{array}$$

Factors of 15

Begin. + End

1, 3, , 5, 15

1, 3, 5, 15

$$1 \times 15 = 15$$

$$3 \times 5 = 15$$