

AUGUST 2025						
M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JULY  
30th Week • 205-160

2025  
**24**  
THURSDAY

360; we shall represent it first by  $2 \times 180$ . Now 180 is equal to  $2 \times 90$ , and

$$\left. \begin{array}{l} 90 \\ 45 \\ 15 \end{array} \right\} \text{ is the same as } \left\{ \begin{array}{l} 2 \times 45 \\ 3 \times 15, \text{ and lastly.} \\ 3 \times 15 \end{array} \right.$$

$\therefore 360$  may be represented by these simple factors  $\boxed{2 \times 2 \times 2 \times 3 \times 3 \times 5}$

## Origins of the school prime factorization algorithm

1. The Greek foundation — The Euclidean Algorithm  
(c. 300 BCE)

• The real conceptual ancestor of prime factorization is Euclid's Elements, especially Book VII.

• There Euclid proves:

1. Every number can be expressed as a product of primes. (the Fundamental Theorem of Arithmetic)