Bubble Method to find LCM

Example 1: Find the LCM of 12 and 20

$$12 = 2 \bullet 2 \bullet 3 \qquad 20 = \cancel{2} \bullet \cancel{2} \bullet 5$$

$$\boxed{2 \bullet 2 \bullet 3 \bullet 5}$$

LCM(12,20) = 2•2•3•5 = 60
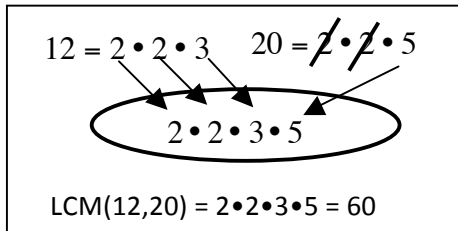
Find the prime factors of the given values. Be sure to write the prime factorization side-by-side as shown.

"Write the prime factors of one of the integers in the LCM bubble." (it doesn't matter which set of factors you start with).

Compare the factors of 2nd integer to what is already in the LCM bubble.

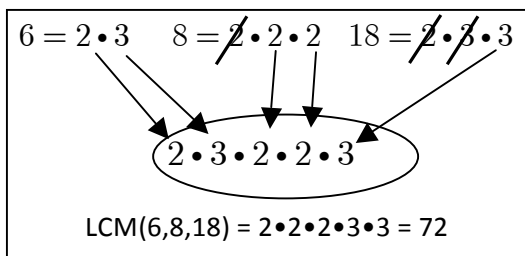Ask: "Is there a 2 already represented in the bubble?" [yes] "Do we need it?" [no] "So cross it out." Is there a second 2 represented in the bubble?" [yes] "Do we need it?" [no] "So cross it out."
"Is there a 5 represented in the bubble?" [no] "So place it into the LCM bubble"

"If we multiply the factors in the LCM bubble the result (60) is the Least Common Multiple of 12 and 20."

Note: The factors of each integer are represented in the bubble.

Example 2: Find the LCM of 6, 8, 18

$$6 = 2 \bullet 3 \qquad 8 = \cancel{2} \bullet 2 \bullet 2 \qquad 18 = \cancel{2} \bullet \cancel{3} \bullet 3$$

$$\boxed{2 \bullet 3 \bullet 2 \bullet 2 \bullet 3}$$

LCM(6,8,18) = 2•2•2•3•3 = 72

Find the prime factors of the given integers. Be sure to write the prime factorization side-by-side as shown.

"Write the prime factors of one of the integers in the LCM bubble."

(it doesn't matter which set of factors you start with).

Compare factors of 2nd integer to what is already in the LCM bubble.

Ask: "Is there a 2 already represented in the bubble?" [yes] "Do we need it?" [no] "So cross it out." "Is there a second 2 represented in the bubble?" [no] "Write a second 2 into the bubble." Is there a third 2 represented in the bubble" [no] "So place it into the LCM bubble"

Compare factors of the 3rd integer to what is already in the LCM bubble.

Ask: "Is there a 2 already in the bubble?" [yes] "So cross it out."
"Is there a 3 represented in the bubble?" [yes] "So cross it out."
"Is there a second 3 represented in the bubble" [no] "So place it into the bubble"

"If we multiply the factors in the LCM bubble the result (72) is the Least Common Multiple of 6, 8, and 18."

Note: The factors of each integer are represented in the bubble.