

# LCM (4-4)

<b>LCM</b>	<del>Decode</del>
Definition the smallest multiple that two #s share	Example 3      7 3: 3, 6, 9, 12, 15, 18, 21, 24... 7: 7, 14, 21, 28...

**Example 1.** Find the LCM.

I Do	We Do
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <math>16</math>  <math>\swarrow \searrow</math>  <math>(2) \quad 8</math>  <math>\swarrow \searrow</math>  <math>(2) \quad 4</math>  <math>\swarrow \searrow</math>  <math>(2) \quad (2)</math> </div> <div style="text-align: center;"> <math>16, 24</math> </div> <div style="text-align: center;"> <math>24</math>  <math>\swarrow \searrow</math>  <math>(3) \quad 8</math>  <math>\swarrow \searrow</math>  <math>(2) \quad 4</math>  <math>\swarrow \searrow</math>  <math>(2) \quad (2)</math> </div> </div> <p> <math>16: 2 \cdot 2 \cdot 2 \cdot 2</math>  <math>24: 2 \cdot 2 \cdot 2 \cdot 3</math> </p> <p> <math>2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 =</math>  <math>16 \cdot 3 = 48</math> </p>	$20, 25$

We Do	You Do
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <math>6, 8, 20</math> </div> <div style="text-align: center;"> <math>20</math>  <math>\swarrow \searrow</math>  <math>4 \quad (5)</math>  <math>\swarrow \searrow</math>  <math>(2) \quad (2)</math> </div> </div> <p> <math>6: 2 \cdot 3</math>  <math>8: 2 \cdot 2 \cdot 2</math>  <math>20: 2 \cdot 2 \cdot 5</math> </p> <p> <math>2 \cdot 2 \cdot 2 \cdot 3 \cdot 5</math>  <math>8 \cdot 3 \cdot 5</math>  <math>24 \cdot 5 = 120</math> </p>	$15, 30, 50$

**Example 2.** Find the LCM.

I Do	We Do
$15x^2, 27x$ $15x^2: 3 \cdot 5 \cdot x \cdot x$ $27x: 3 \cdot 3 \cdot 3 \cdot x$ $3 \cdot x \cdot 3 \cdot 3 \cdot 5 \cdot x$ $135x^2$	$6m^2, 10m^3$
I Do	We Do
$14ab, 21bc$ $14ab: 2 \cdot 7 \cdot a \cdot b$ $21bc: 3 \cdot 7 \cdot b \cdot c$ $7 \cdot b \cdot 2 \cdot 3 \cdot a \cdot c$ $42abc$	$r^2, 5rst$

**Example 3.** You buy a package that contains 6 hot dogs. You buy a pack of 8 hot dog buns. How many packs of each would you have to buy to not waste any of each.

<b>LCD</b>	Decode least common denominator
Definition the LCM of the denominators	Example $\frac{1}{3}$ $\frac{3}{4}$ $\frac{\quad}{12}$

**Example 4.** Comparing fractions using LCD.

I Do	We Do
$\frac{5 \cdot 3}{6 \cdot 3}$ and $\frac{7 \cdot 2}{9 \cdot 2}$ $\frac{15}{18} > \frac{14}{18}$ $\frac{5}{6} > \frac{7}{9}$	$\frac{5 \cdot 5}{8 \cdot 5}$ and $\frac{13}{20}$ $\frac{25}{40} < \frac{26}{40}$ $\frac{5}{8} < \frac{13}{20}$
We Do	You Do
$2 \frac{7 \cdot 5}{12 \cdot 5}$ and $2 \frac{11 \cdot 4}{15 \cdot 4}$ $2 \frac{35}{60} < 2 \frac{44}{60}$ $2 \frac{7}{12} < 2 \frac{11}{15}$	$7 \frac{5 \cdot 5}{16 \cdot 5}$ and $7 \frac{3}{10}$ $7 \frac{25}{80} > 7 \frac{24}{80}$ $7 \frac{5}{16} > 7 \frac{3}{10}$

IXL Lessons 7<sup>th</sup> Grade → A.6, F.5, F.6  
 15, 30, 45, 60

**Example 4.** Ordering fractions using LCD.

I Do	We Do
$\begin{array}{r} \overset{7 \cdot 3}{6} \overset{11 \cdot 2}{9} \overset{2 \cdot 1}{3} \overset{1 \cdot 6}{6} \\ \frac{21}{18} \quad \frac{22}{18} \quad \frac{2}{3} \\ \frac{24}{18} \end{array}$ $\frac{7}{6}, \frac{11}{9}, \frac{2}{3}$	$\frac{8}{15}, \frac{1}{5}, \frac{3}{10}$

We Do	You Do
$\begin{array}{r} 18 \cdot 12 \quad 43 \cdot 5 \quad 5 \cdot 7.5 \\ 18 \cdot 5 \quad 18 \cdot 5 \quad 12 \cdot 7.5 \\ \frac{216}{90} \quad \frac{215}{90} \quad \frac{37.5}{90} \\ \frac{217.5}{90} \end{array}$ $\frac{43}{18}, \frac{12}{5}, 2\frac{5}{12}$	$\frac{3}{4}, \frac{4}{9}, \frac{7}{15}$

18, 36, 54, 72, 90