

OBJECTIVE 2: Finding the Least Common Denominator (LCD)STEPS:

1. Check for common denominators. If yes, perform indicated operation. If no, complete the steps below.
2. GCF if possible.
3. Factor the current denominator
4. Create your LCD by including one of everything that is in each denominator.

TASK 1: Find the LCD for each of the fractions below when monomials are provided.

a) $\frac{1}{5}$ & $\frac{3}{22}$

5 2 · 11
[110]

b) $\frac{7}{5x}$ & $\frac{6}{15x^2}$

5 · x 3 · 5 · x · x
3 · 5 · x · x
[15x²]

c) $\frac{3}{14}$ & $\frac{5}{21}$

2 · 7 7 · 3
2 · 7 · 3
[42]

d) $\frac{4}{9y}$ & $\frac{11}{15y^3}$

3 · 3 · y 3 · 5 · y · y · y
3 · 3 · 5 y y y
[45y³]

TASK 2: Find the LCD for each pair of fractions when factors are given.

a) $\frac{7x}{(x+2)}$ & $\frac{-5x^2}{(x-2)}$

[(x+2)(x-2)]

b) $\frac{3}{x}$ & $\frac{6}{(x+4)}$

[x(x+4)]

c) $\frac{16}{(y-5)}$ & $\frac{3y^3}{(y-4)}$

[(y-5)(y-4)]

d) $\frac{8}{a}$ & $\frac{5}{(a+2)}$

[a(a+2)]

TASK 3: Find the LCD for each pair HARDER!

a) $\frac{6m^2}{3m+15} & \frac{2}{(m+5)^2}$
 $3(m+5)(m+5)$

$3(m+5)(m+5)$

b) $\frac{2x^3}{(2x-1)^2} & \frac{5x}{6x-3}$
 $(2x-1)(2x-1) \quad 3(2x-1)$

$3(2x-1)(2x-1)$

c) $\frac{t-10}{t^2-t-6} & \frac{t+5}{t^2+3t+2}$
 $(t-3)(t+2) \quad (t+2)(t+1)$

$(t-3)(t+2)(t+1)$

~~$\begin{matrix} -6 & & 2 \\ -3 & & -1 \\ & 2 & & 2 \\ & 1 & & 3 \end{matrix}$~~

d) $\frac{x-5}{x^2+5x+4} & \frac{x+8}{x^2-16}$
 $(x+4)(x+1) \quad (x+4)(x-4)$

$(x+4)(x+1)(x-4)$

~~$\begin{matrix} 4 & & 1 \\ & 4 & & 5 \end{matrix}$~~

~~$\begin{matrix} -16 & & -4 \\ & 4 & & 0 \end{matrix}$~~

Common Mistakes:

• If + or - then it is all or nothing

Still need help with: