Learning Goal: We are learning to solve equations that contain fractions.

The final step to solving equations is to add fractions into the mix. Do not be afraid! Just follow the process and you will be fine.

Method One only works if Fraction = Fraction "Cross Multiply"

Method 2.
- create common denominators.
- cross out the denominators

Method 3.
- Multiply each term by the common denominator

a) $\dfrac{x}{4} = \dfrac{1}{2}$

$2x = 4$

$x = 2.$

b) $\dfrac{m}{6} = \dfrac{-1(2)}{3(2)}$

$\dfrac{m}{6} = \dfrac{-2}{6}$

$m = -2$

Method 2.

c) $\dfrac{y(3)}{2(3)} = \dfrac{y(2)}{3(2)} - \dfrac{1(6)}{1(6)}$

$\dfrac{3y}{6} = \dfrac{2y}{6} - \dfrac{6}{6}$

$3y = 2y - 6$

$y = -6$

d) $\left(\dfrac{5n}{2} = \dfrac{4n}{3} - \dfrac{7}{6}\right)6$

$15n = 8n - 7$

$\dfrac{7n}{7} = \dfrac{-7}{7}$

$n = -1.$

e) $\dfrac{n(5)}{3(5)} + 2\dfrac{(15)}{1(15)} = \dfrac{n(3)}{5(3)} + 4\dfrac{(15)}{1(15)}$ C·D = 15

$\dfrac{5n}{15} + \dfrac{30}{15} = \dfrac{3n}{15} + \dfrac{60}{15}$

$5n + 30 = 3n + 60$

$\dfrac{2n}{2} = \dfrac{30}{2}$

$n = 15$

f) $\dfrac{(3-y)}{5} = \dfrac{(2-3y)}{4}$ Cross Multiply

$4(3-y) = 5(-2-3y)$

$12 - 4y = -10 - 15y$

$\dfrac{11y}{11} = \dfrac{-22}{11}$

$y = -2$

g) $\left(\dfrac{n+5}{2}-\dfrac{n}{3}=1\right)6$

$3(n+5)-2n=6$

$3n+\overset{-15}{15}-2n=6^{-15}$

$n=-9$

h) $\left(\dfrac{1-x}{4}-\dfrac{x}{2}=7\right)4$

$1-x-2x=28$

$-3x=27$
$\dfrac{-3x}{-3}=\dfrac{27}{-3}$

$x=-9$

i) $\dfrac{2(x+1)}{(3)2}+\dfrac{(2-3x)3}{2(3)}=-1\dfrac{(6)}{1(6)}$

L.D = 6

$2(x+1)+3(2-3x)=-6$

$2x+\boxed{2+6}^{-8}-9x=-6^{-8}$

$\dfrac{-7x}{-7}=\dfrac{-14}{-7}$

$x=2$

Success Criteria:
- I can create equivalent fractions using a common denominator
- I can recognize that once every fraction has a common denominator, the denominator does not matter anymore
- I can then solve the equation using methods from prior lessons