Solving A Linear Equation

(1) Clear the equation of fractions by multiplying by the LCD.
(2) Remove grouping symbols by multiplying out.
(3) Isolate all terms containing the unknown on one side, and all other terms on the other side by transposition (addition and subtraction).
(4) Factor out the unknown. Divide both sides by the multiplier of the unknown.
(5) Reduce, if possible.

Examples:

(1) Solve $A = P(1+i)$ for i

$$A = P + Pi$$
$$A - P = Pi$$
$$\frac{A-P}{P} = i$$

(2) Solve $\frac{1}{x} = \frac{1}{2} - \frac{1}{3}$

Note: Don't invert.
$x \neq 2-3$
$x \neq -1$

$LCD = 6x$

$$6 = 3x - 2x$$
$$6 = x$$

(3) $x - 3yy' = 2 + y'$ ($y' = y$ "prime")

$$x - 2 = y' + 3yy'$$
$$\frac{x-2}{1+3y} = y'(1+3y)$$