

1) Determine whether the equation is identity, conditional or contradiction.

a)  $(x + 4)^2 = x^2 + 16$

b)  $2x - 4 = 2(x - 3) + 2$

c)  $\frac{x}{x-2} = \frac{2}{x-2} + 2$

2) Solve the following equations:

a)  $\frac{1-x}{x+1} = \frac{2}{x} - 1$

b)  $2|2x - 4| - 3 = 13$

c)  $a = \frac{b - rm}{1 - r}$ , for r

d)  $B = \frac{1}{3}(c - x)y$ , for x

3) Decide whether the given pair of equations is equivalent or not?

$$\frac{3x+3}{x+1} = \frac{2x+2}{x+1}, \quad 2x+4 = x+3$$

4) The width of the rectangle is 1 more than half of the length; if the perimeter of the rectangle is 110, find the width & the length.

5) What values of  $x$  that makes the following equations true:

a)  $|2x - 4| = -3$

b)  $|3x - 11| = -3x + 11$

c)  $|x + 1| = |x + 3| + 4$