



MATH LEAGUE 12TH WEEK SOLUTIONS:

1-

SOLVING THE EQUATION;

$$\frac{\sqrt{3+x} + \sqrt{3+x}}{\sqrt{3+x} - \sqrt{3+x}} = 2$$

$$\frac{\sqrt{3+x} + \sqrt{3+x}}{} = 2$$

THE SOLUTION IS **UNDIFEID**

-2

$$x^2 + xy = 28 \dots (1)$$

FINDING THE VALUE OF XY:

$$y^2 + xy = 21 \dots (2)$$

$$x^2 + y^2 + 2xy = 49$$

$$(x+y)^2 = 49$$

$$x+y=7$$

$$x^2 - y^2 = 7$$

$$x^2 - y^2 = (x+y)(x-y)$$

$$7(x-y) = 7$$

$$x-y=1$$

$$(x-y)^2 = 1$$

$$x^2 + y^2 - 2xy = 1$$

$$x^2 + y^2 + 2xy + x^2 + y^2 - 2xy = 50$$

$$2(x^2 + y^2) = 50$$

$$x^2 + y^2 = 25$$

$$x^2 + y^2 + 2xy = 25 + 2xy$$

$$2xy = 24$$

$$xy = 12$$

