

1. Find the equation of the line through the two points (22, 35) and (42, 105)

$$m = \frac{105-35}{42-22} = 3.5$$

$$\text{Answer: } y - 35 = 3.5(x - 22) \text{ or } y = 3.5x - 42$$

2. Find the profit function for the firm with a cost function of $C(x) = 15x + 28$ and revenue function $R(x) = 22x$.

$$\text{Answer: } P = 22x - (15x + 28) = 7x - 28$$

3. Find the break even point for the firm with a cost function of $C(x) = 15x + 28$ and revenue function $R(x) = 22x$.

$$15x + 28 = 22x$$

$$28 = 7x$$

$$x = 4$$

so the break even point is (4, 88)