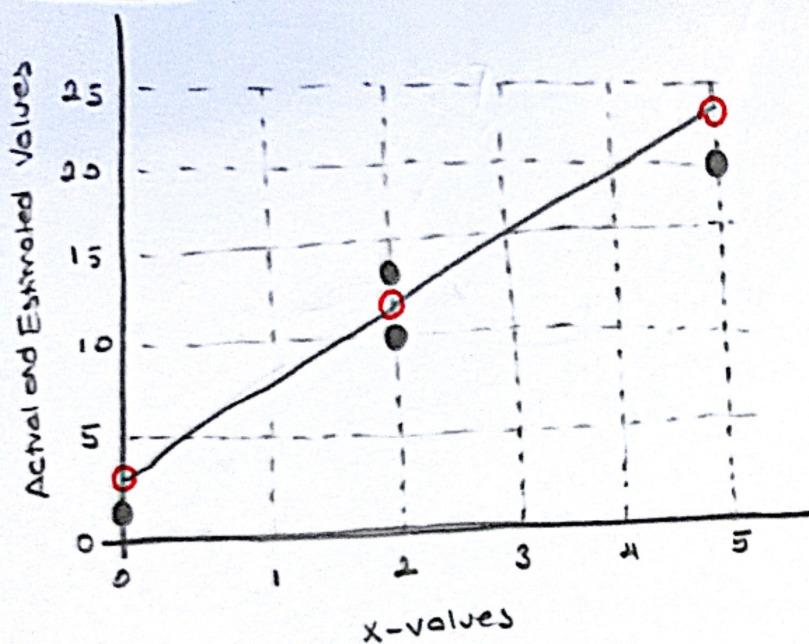


● → Actual Values ○ → estimated values

Question 2* MSE

Actual	Prediction	error	error squared	total of error squared	MSE
2	3	1	1	12	12/4 = 3
10	11	1	1		
12	11	1	1		
20	23	3	9		

Question 3

$$* \text{Accuracy} = p(\text{class} = \text{Positive}) \times p(\text{prediction} = \text{positive}) + p(\text{class} = \text{negative}) \times p(\text{prediction} = \text{negative})$$

$$\Rightarrow \text{Accuracy} = 0.7 \times 0.75 + 0.3 \times 0.25$$

$$= 0.6 \rightarrow 60\%$$

$$* \text{Entropy} = -(p(\text{class} = \text{negative}) \times \ln(p(\text{prediction} = \text{negative})) + p(\text{class} = \text{pos}) \times \ln(p(\text{prediction} = \text{positive})))$$

$$\text{Entropy} = -(0.3 \times \ln(0.25) + 0.7 \times \ln(0.75)) = 0.617265$$

$$\downarrow$$

$$-1.386294$$

$$\downarrow$$

$$-0.28768$$

$$\approx$$

$$62\%$$