

$$\#3 \quad \hat{y} = 0.688x + 30.6$$

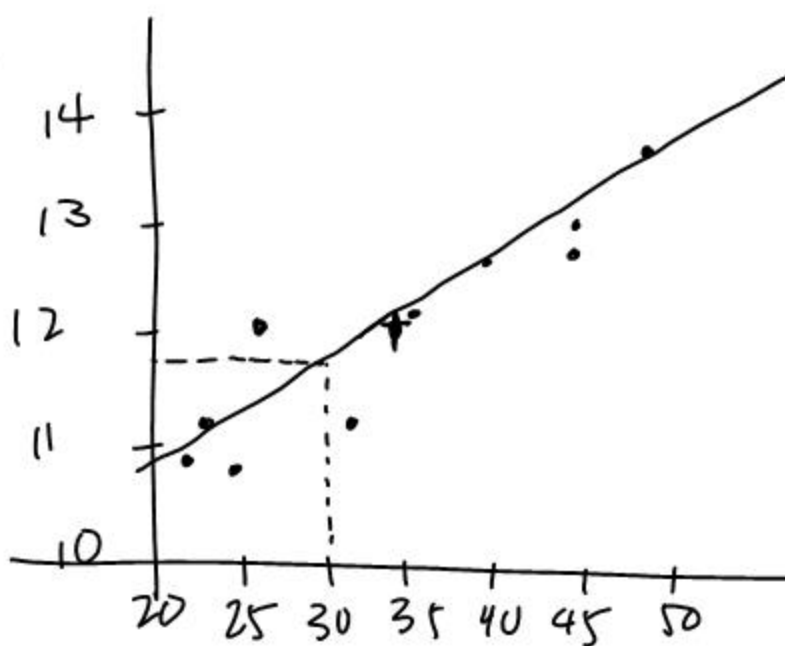
$$r = 0.785$$

(d) Estimate the child's IQ if her mother's IQ is 112.

$$112 = 0.688x + 30.6$$

$$x = \frac{112 - 30.6}{0.688} \approx 118$$

#3.



4	2	4
22		10.9
23		11.1
24		10.8
25		12.0
32		11.2
35		12.1
39		12.6
45		13.0
45		12.7
+ 50		13.6
<u>340</u>		<u>120.0</u>

$$\bar{x} = 34, \quad \bar{y} = 12$$

$$\hat{y}(30) \approx 11.6$$

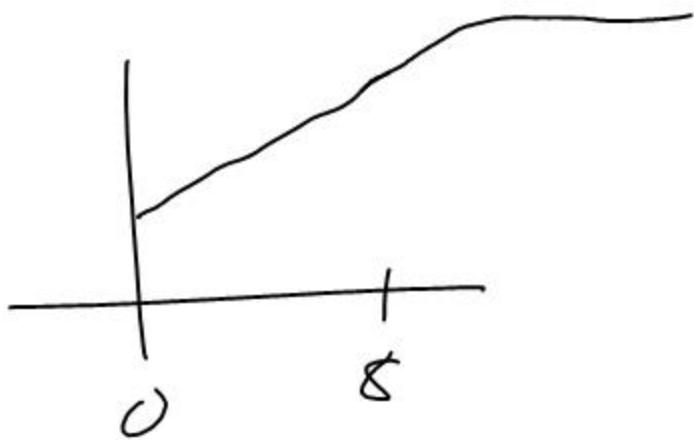
#5

$$(\bar{x}, \bar{y}) = (4, 30)$$

$$r = 0.986$$

$$\hat{y} = 1.83x + 22.7$$

$$\hat{y}(4.5) = 30.9 \text{ cm}$$



#7

$$\hat{y} = \underline{10.7x} + \underline{121}$$

$$r = 0.970$$

The gradient (slope) is the average cost of producing 1 coat. \$10.70/coat,

The y-intercept is the cost of producing 0 coats.

$$\hat{y}(70) = 866 \text{ dollars}$$

profit = revenue - cost

13 coats

