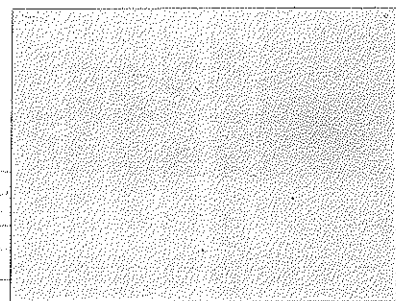


*Assignment #12
math 230-002



7.1. 36. a. On Graph paper

I picked this line because it goes through 2 of the data points and it is sort of in the middle of all the data points.

b. mid parent height 170 cm:

-line predicts the son's height to be 177.5 cm.

mid parent height 180 cm:

-line predicts the son's height to be 186 cm.

c. son's height 179 cm - line predicts the mid parents height to be 172 cm

son's height 182 cm - line predicts the mid parents height to be 175 cm.

*Equation: p = mid parent's height (cm)

s = son's height (cm)

$$s = m(p) + b$$

	p	s
106	173	171.5
	173	180

$\Delta s = 8.5$ slope = $\frac{\Delta s}{\Delta p} = \frac{8.5}{10} = .85$

$$180 = .85(173) + b$$

$$180 = 147.05 + b$$

$$-147.05 \quad -147.05$$

$$b = 32.95$$

$$\text{Equation: } s = .85p + 32.95$$

38. a. $13.9 - 12.2 = 1.7$

The percentage decrease in white non-Hispanic dropouts from 1975-2002 is 1.7.

b. Black non-hispanic = $27.3 - 14.6 = 12.7$

white non-hispanic = $13.9 - 12.2 = 1.7$

$$12.7 \div 1.7 = 7.4$$

• Black non-hispanic dropouts is 7 times the amount of white non-hispanic dropouts

c. on graph paper

-A positive association between the number of white + black non-hispanic dropouts.

d. trend line on graph

According to my trend line the white non-hispanic dropout rate is about 13% if the black non-hispanic dropout rate is 17%.

*Equation: B = Black non-hispanic

W = white non-hispanic

$$w = m(B) + b$$

B	W
23.5	14.4
16	12.8

7.5 < 23.5 | 14.4 > 11.6 slope = $\frac{\Delta W}{\Delta B} = \frac{1.6}{7.5} = .213$

$$14.4 = (.213)(23.5) + b$$

$$14.4 = 5.005 + b$$

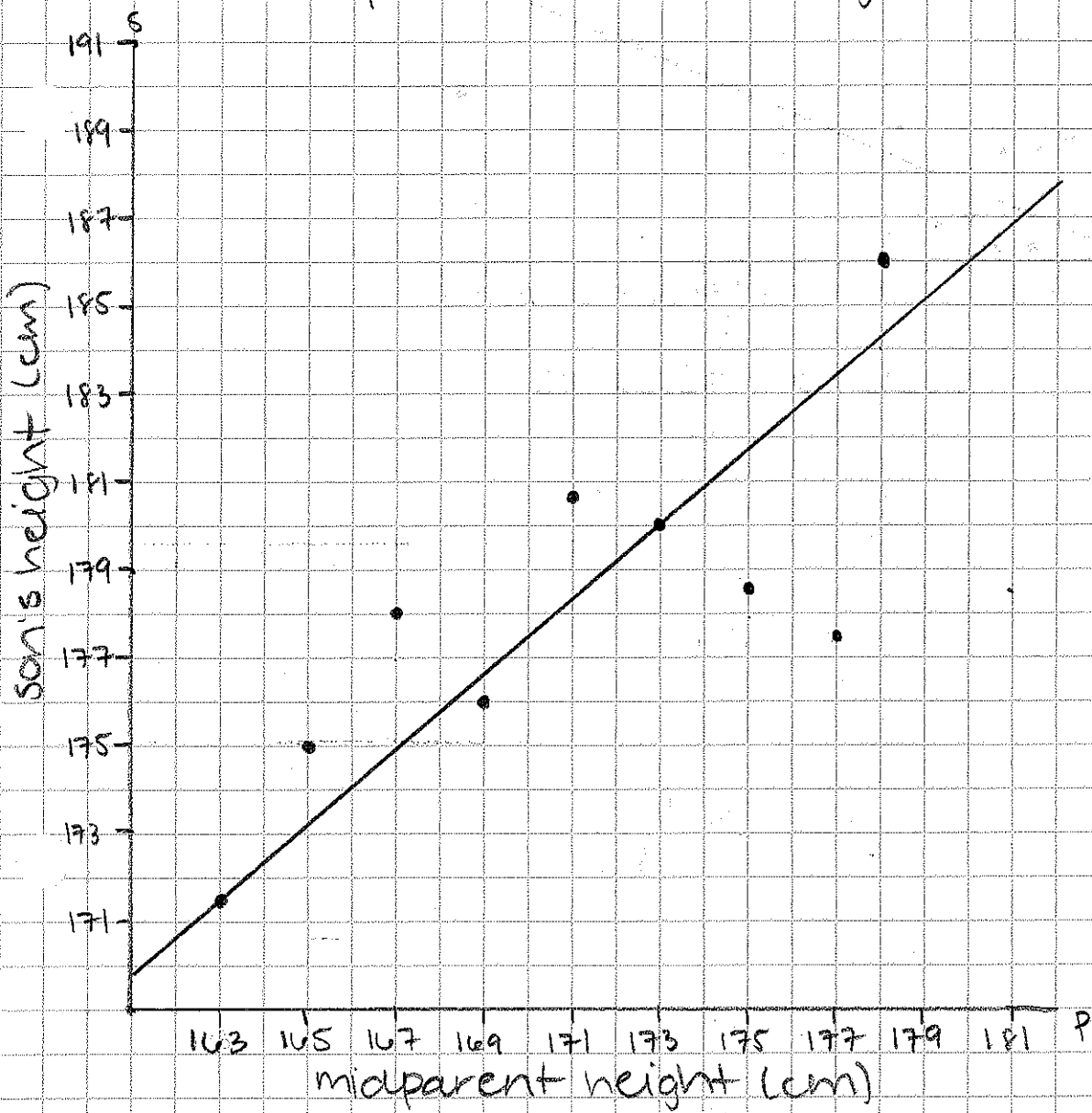
$$-5.005 \quad -5.005$$

$$b = 9.39$$

$$\text{Equation } \textcircled{=} w = .213(B) + 9.39$$

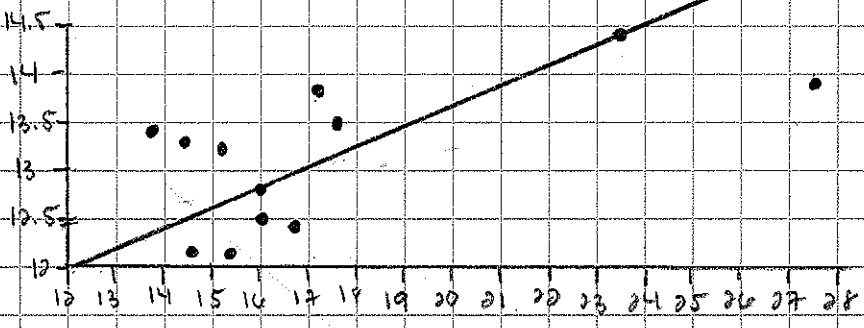
36.

midparent & son's Heights



38 C.

White Non-Hispanic



Black Non-Hispanics