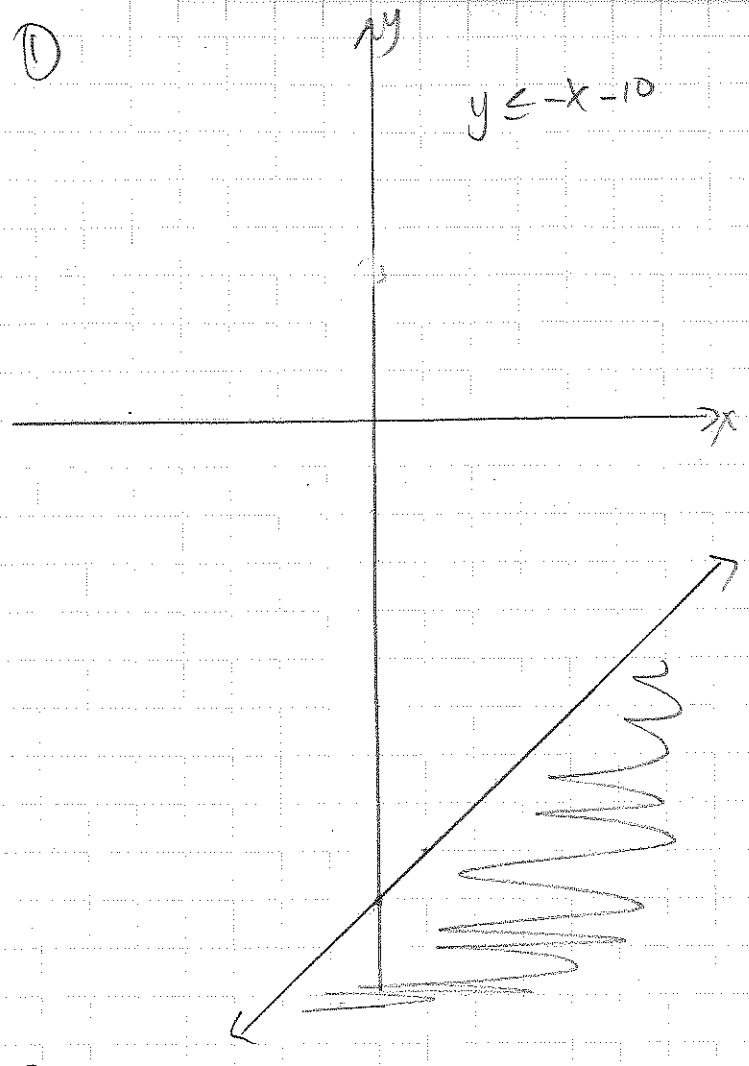
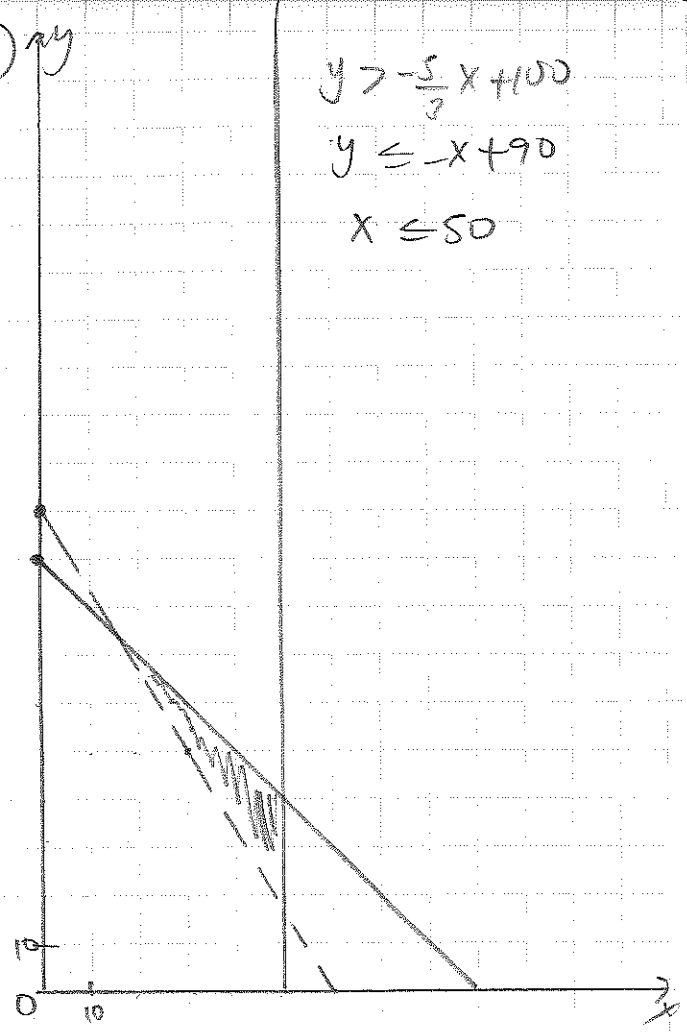
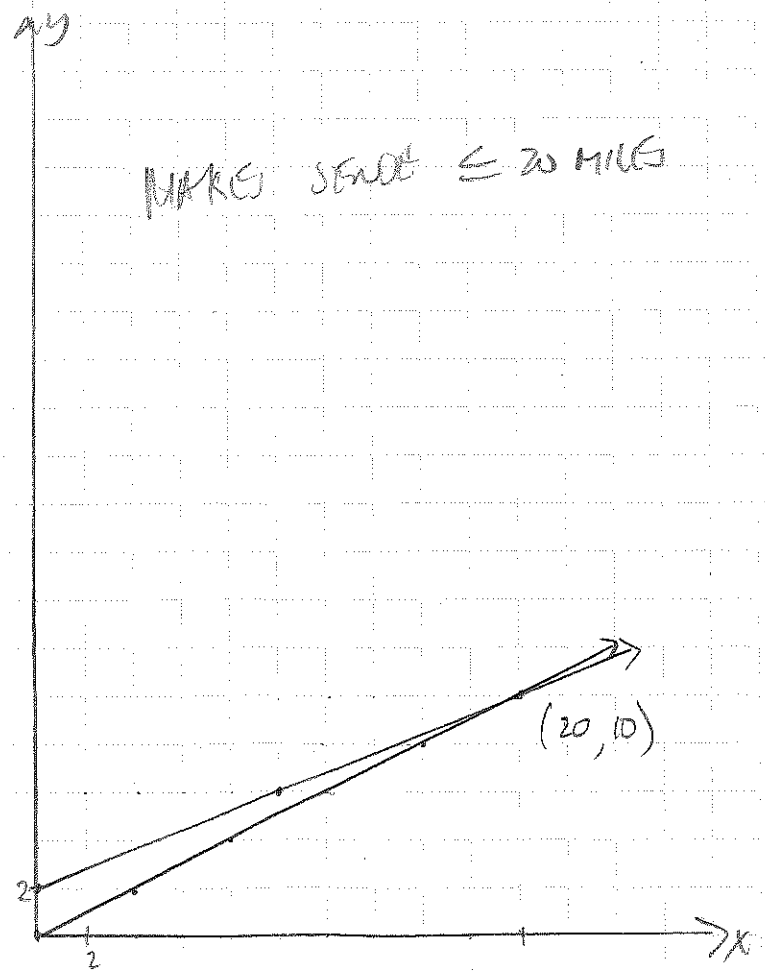
①

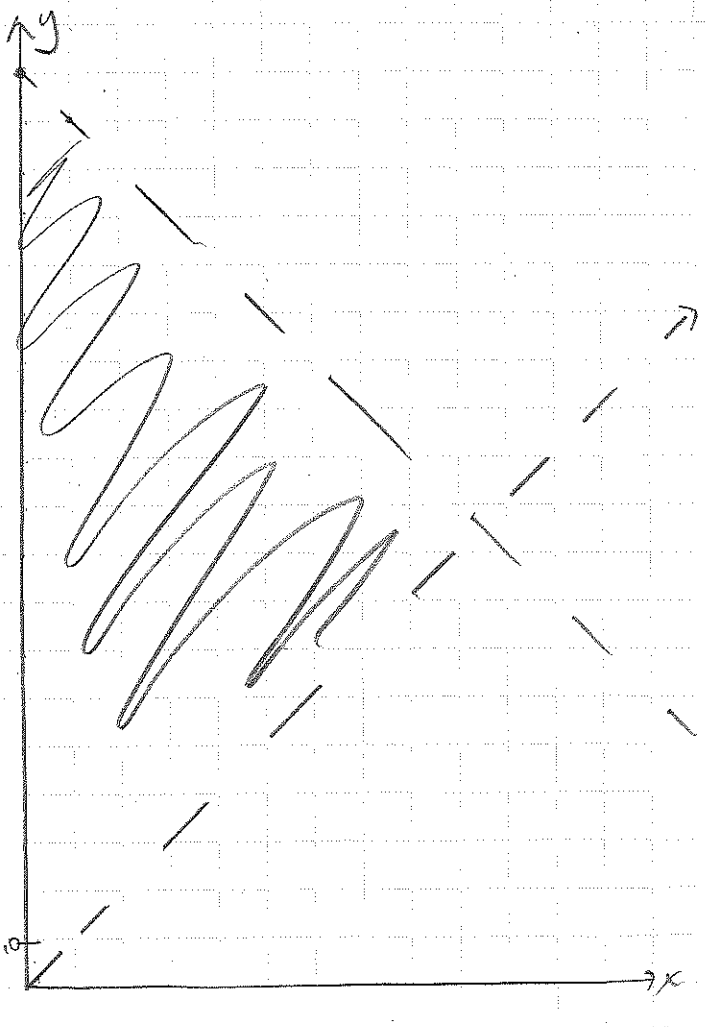

y
x
$y \le -x - 10$

②


y
x
$y > -\frac{5}{3}x + 100$
$y \le -x + 90$
$x \le 50$
10
0
10

③


y
x
MAKES SENSE ≤ 20 MILES
(20, 10)
2
2


y
x
10

① $x - y \geq 10$

$y \leq x - 10$

② $5x + 3y > 300$

$y > -\frac{5}{3}x + 100$

$x + y \leq 90$

$y \leq -x + 90$

$x \leq 50$

③ SANJOY: $y = \frac{2}{3}x + 2$

MANJOY: $y = \frac{1}{2}x$

MAKES SENSE TO USE SANJOY FOR ≤ 20 MILES.

④ $x < y$

$y > x$

$2x + 2y > 380$

$y > -x + 190$

⑤ $w^2 + 2w - 4 - 8w^3 + 12w^2 - 36w$

(a) $-8w^3 + 13w^2 - 34w - 4$

	y	$-x$
x	xy	$-x^2$
y	y^2	$-xy$
z	zy	$-zx$

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

⑥ $a + b = 2bx$

$b - 2bx = -a$

$b(1 - 2x) = -a$

$\rightarrow b = \frac{-a}{1 - 2x}$

⑦ x = woman

y = daughter

$x + 20 + y + 20 = 80$

$x + y = 40$

$y = -x + 40$

$x - y = 20$

$y = x - 20$

$-x + 40 = x - 20$

$60 = 2x$

$x = 30$

DAUGHTER = 10

⑧ $x + (x+2) + (x+4) = -48$

$3x = -54$

$x = -18$

$-18, -16, -14$

⑨ $88 < \frac{83 + 94 + 91 + x}{4} < 92$

$352 < 268 + x < 368$

$84 < x < 100$

⑩ SLOPE (HOPE) $= \frac{1}{3}$

SLOPE (PEACH) $= -3$

POINT $(7, 6)$

$y = -3x + b$

$6 = -3(7) + b \rightarrow b = 27$

⑨ $y = -3x + 27$

Slope (Eqm) = 1

Slope (Perp) = 1

Point (2, 3)

$y = x + b$

$3 = 2 + b$

$b = 1$

(10) $y = x + 1$

(11) (a) $(-2, -1.5)$ & $(6.8, 0.7)$

(b) $(-2, 7)$, $(2.67, 2.33)$

(c) $(3, -1)$

(12) C

(13) $|x - 15| \leq 0.3$

$14.7 \leq x \leq 15.3$

(14) (a) $-6 \leq x \leq -2$

(b) $x \leq -2$ or $x > 6$

(15) $\frac{-x-6}{3} > 9$ or $\frac{11+x}{2} \geq 7$

$-x - 6 > 27$ or $11 + x \geq 14$

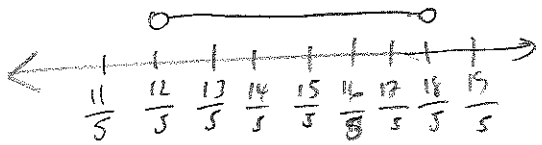
$-x > 33$ or $x \geq 3$

$x < -33$

(16) $-3 < 3 - 5x + 10 + 2 < 3$

$-3 < -5x + 15 < 3$

$-18 < -5x < -12$

$\frac{18}{5} > x > \frac{12}{5}$

$\frac{12}{5} < x < \frac{18}{5}$