Finding Speed from a	Graph ~> ANSWERS
a) A to B. (0,0) (8,10)	b) B to C (8,10) (18,35)
Speed = $y_2 - y_1$ $x_2 - x_1$	Speed = $y_2 - y_1$ $x_2 - x_1$
= 10-0 8-0	$= \frac{35-10}{18-8}$
$= \frac{10}{8}$ = 1.25 Km × 60 min	$= \frac{25}{10}$ $= \frac{2.5 \text{ Km} \times 60 \text{min}}{10}$
$= 75 \mathrm{Km/h}$	= 150 Km/h.

c) C to D
(18,35) (28,45)
Speed =
$$\underbrace{Y_2 - Y_1}_{X_2 - X_1}$$

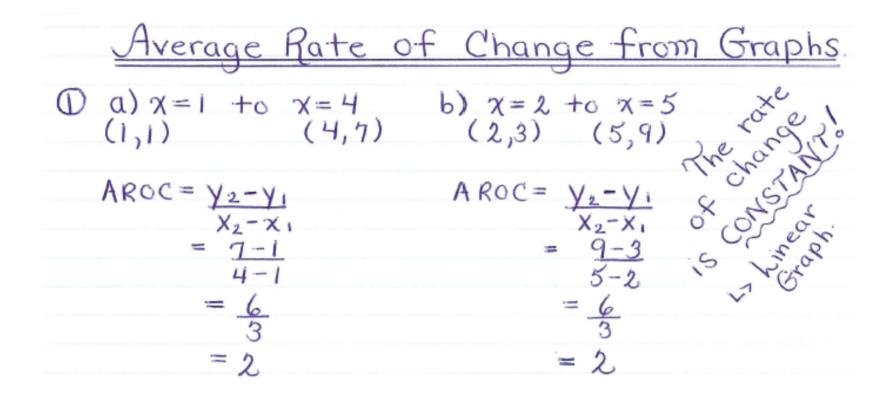
= $\underbrace{45 - 35}_{10}$
= $\underbrace{10}_{10}$
= $\underbrace{1Km}_{10} \times \underbrace{60min}_{1hr}$
= $\underbrace{65 - 45}_{8}$
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e) Eto F (36,65) (48,70)

Speed = $\frac{y_2 - y_1}{x_2 - x_1}$ = $\frac{70 - 65}{48 - 36}$ = $\frac{5}{12}$

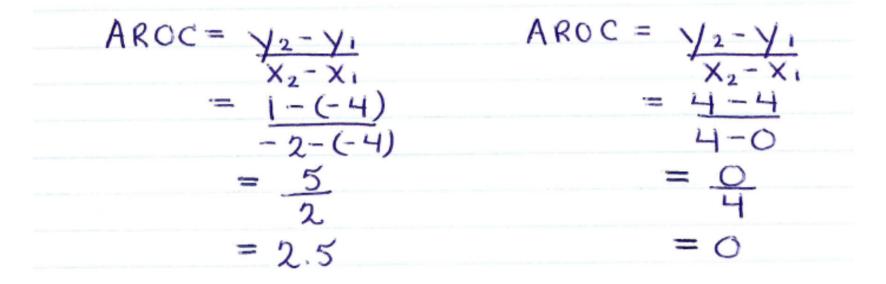
0.42 Km × 60min. min Ibr = 25.2 Km/h

f) F to G (48,70) (56,70)	Average Speed for entire trip. $(A \rightarrow G)$
Speed = $\frac{Y_2 - Y_1}{X_2 - X_1}$	(0,0) (56,70)
= 70-70	Average = $V_2 - V_1$
$= \frac{70-70}{56-48}$	Average = $y_2 - y_1$ Speed $x_2 - x_1$ = $70 - 0$
	AG = 70-0
= 0	56-0
= O Km	= 70
min	56
= 0 Km/h	= 1.25 Km
	=> 75 Km/h



2a) $\chi = 3$ to $\chi = 5$ (3,0) (5,8)	b) $x = 2$ to $x = 0$ (2,-1) (0,3)
$AROC = \underbrace{Y_2 - Y_1}_{X_2 - X_1}$	$AROC = \frac{y_2 - y_1}{x_2 - x_1}$
= <u>8-0</u> 5-3	= 3 - (-1) 0 - 2
$=\frac{8}{2}$	$= \frac{4}{-2}$
= 4	= -2

3a) X = -4 + 0 X = -2(-4,-4) (-2,1) b) $\chi = 0$ to $\chi = 4$ (0,4) (4,4)



4. a) $\chi = 0$ to $\chi = 2$ b) $\chi = 1$ to $\chi = 3$ (0,1) (2,4) (1,2) (3,8)

$AROC = Y_2 - Y_1$	AROC = Y2-Y1
$X_2 - X_1$	$X_2 - X_1$
2-0	- 8-2
= 3	= 6
2	2
= 1.5	= 3

5. a)
$$x=3$$
 to $x=0$ b) $x=2$ to $x=-2$
(3,-6) (0,-3) (2,-5) (-2,-1)
AROC = $\underbrace{y_2 - y_1}_{X_2 - x_1}$ AROC = $\underbrace{y_2 - y_1}_{X_2 - x_1}$
= $-3 - (-6)$ = $-1 - (-5)$
0-3 CONSTANT -2-2
= 3 $\downarrow = -4$
-3 LINEAR GRAPH -4
= -1

6.
$$\begin{array}{ll} \chi = -2 \text{ to } \chi = 3 \\ (-2,2) \\ (-2,2$$