

UNIT 5 REVIEW

LINEAR RELATIONS

DIRECT VARIATION

$$y = mx$$

- or constant of variation
- or slope
- or first differences.
- or rate of change

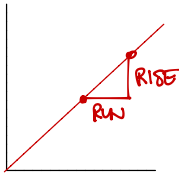
PARTIAL VARIATION

$$y = mx + b$$

- or fixed value
- or starting value
- or y-intercept
- or vertical intercept

EQUATIONS

GRAPHS



$$m = \frac{\text{RISE}}{\text{RUN}} = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$$

/ positive slope $m = 0$
 \ negative slope $m = \text{undefined}$

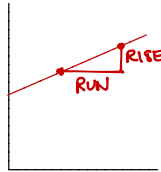


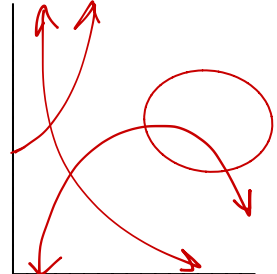
TABLE of VALUES

x	y	1 st DIFFERENCES
0	0	2-0=2 4-2=2 6-4=2 CONSTANT
1	2	
2	4	
3	6	

x	y	1 st DIFFERENCES
0	3	6-3=3 9-6=3 12-9=3 CONSTANT
1	6	
2	9	
3	12	

NON-LINEAR RELATIONS

$$y = x^2 \quad y = \frac{1}{x} \quad y = 3^x$$



x	y	1 st DIFFERENCES
0	0	1-0=1 4-1=3 9-4=5 DIFFERENT
1	1	
2	4	
3	9	