

Worksheet 2015-8 EI-00004(2)

(1) Complete the tables and represent the point on a Cartesian plane:

Join the points.

Indicate whether each of the graphs will be increasing or decreasing.

Is the graph linear or non-linear?

(a) $y = \frac{4}{x}$

x	-4	-2	-1	0	1	2	4
y	-1	-2	-4	E	4	2	1

$$y = \frac{4}{x} \rightarrow y = \frac{4}{-4} = -1$$

$$y = \frac{4}{x} \rightarrow y = \frac{4}{-2} = -2$$

$$y = \frac{4}{x} \rightarrow y = \frac{4}{-1} = -4$$

$$y = \frac{4}{x} \rightarrow y = \frac{4}{0} = \text{undefined}$$

$$y = \frac{4}{x} \rightarrow y = \frac{4}{1} = 4$$

$$y = \frac{4}{x} \rightarrow y = \frac{4}{2} = 2$$

$$y = \frac{4}{x} \rightarrow y = \frac{4}{4} = 1$$

(b) $y = x$

x	-4	-2	-1	0	1	2	4
y	-4	-2	-1	0	1	2	4

$$y = x = -4$$

$$y = x = -2$$

$$y = x = -1$$

$$y = x = 0$$

$$y = x = 1$$

$$y = x = 2$$

$$y = x = 4$$

(2) Consider the following two points: A(-1 ; 6) and B(1 ; -6)

- Write the ordinate of A.
- Write the abscissa of B.
- Will AB be a horizontal line if A and B is drawn on a Cartesian plane and joined?
- In which quadrants will A and B lie?

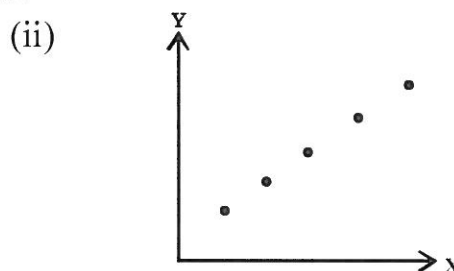
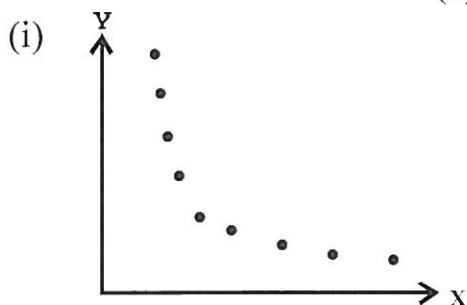
(a) 6 (y - coordinate)

(b) 1 (x - coordinate)

(c) No (y - coordinates differ)

(d) A $\rightarrow$ 2nd and B $\rightarrow$ 4th

- (3) Is the following graphs:
- continuous or discrete?
 - increasing or decreasing?
 - linear or non-linear?



(a) Discrete

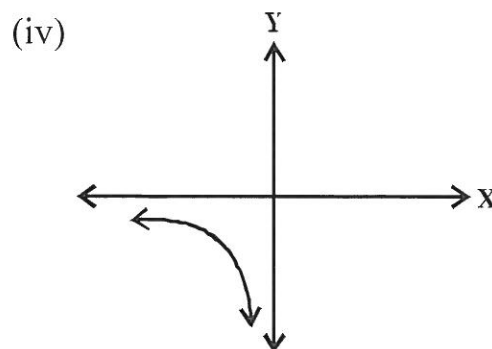
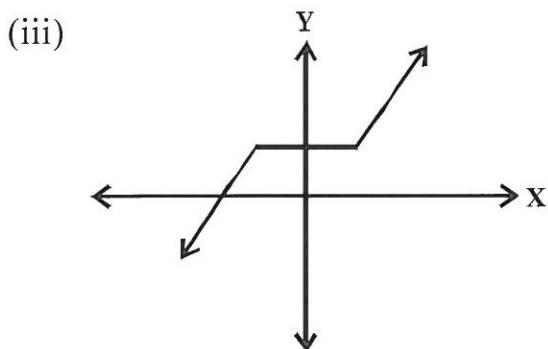
(b) Decreasing

(c) Non-linear

(a) Discrete

(b) Increasing

(c) Linear



(a) Continuous

(b) Increasing

(c) Linear

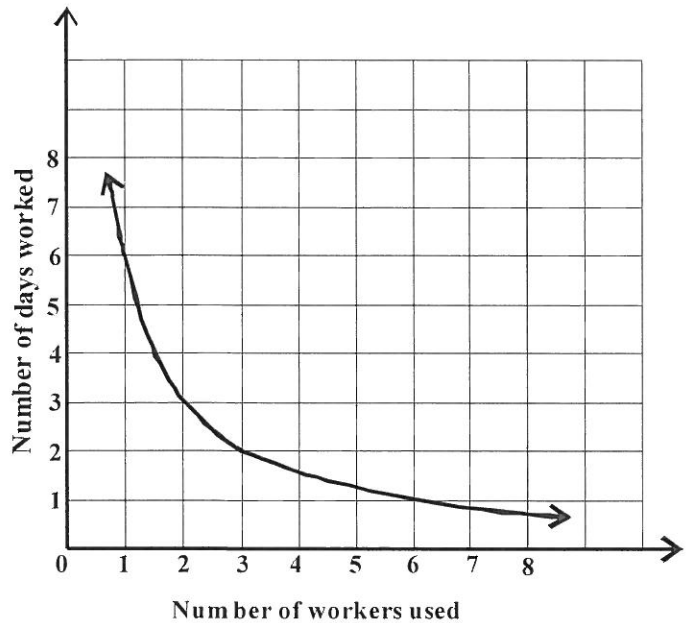
(a) Continuous

(b) Decreasing

(c) Non-linear

(4) The graph shows the number of workers that is needed to complete a certain task within a certain number of days.

- (a) Is the graph continuous or discrete?
- (b) Is the graph linear or non-linear?
- (c) How many days will six workers need to complete the task?
- (d) Is the graph increasing or decreasing?
- (e) Is the graph directly proportional or indirectly proportional?



(a) Continuous

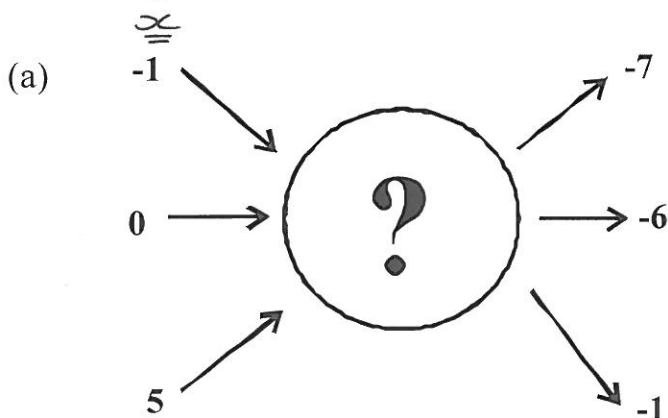
(b) Non-linear

(c) 1 day $\rightarrow$ At 8

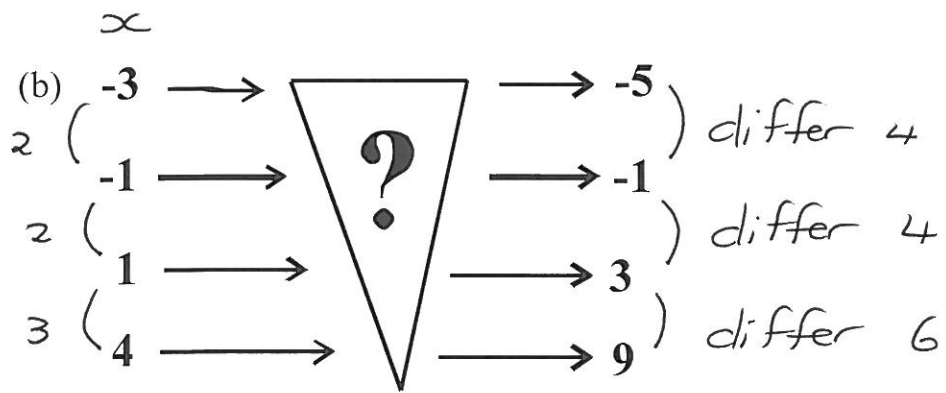
(d) Decreasing

(e) Indirectly proportional

(5) Determine the rule for the relationship between the input-and output values for each of the following:



$$y = x - 6$$



$$? = \frac{2x + 1}{2}$$

$$\frac{4}{2} = \frac{6}{3} = 2$$

(1) (a)
(b)

