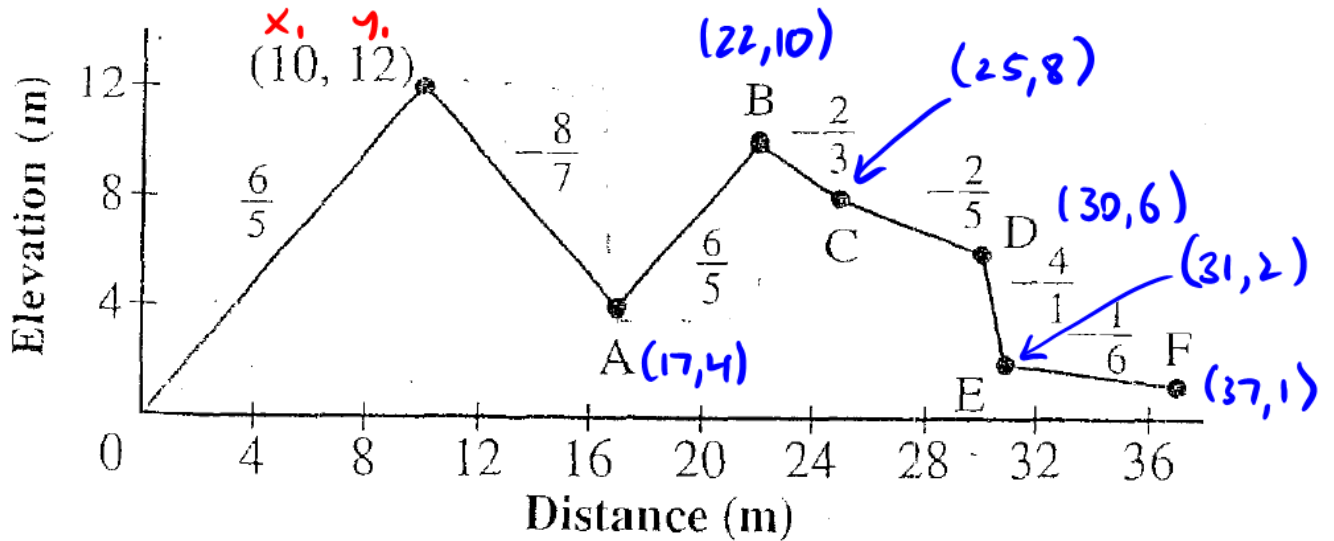


**Performance Task - Slope using fractions**

Here is a side view of a water coaster. The slope of each segment is given. Determine the coordinates of each point A to F.



Point A - using slope Formula

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{-8}{7} = \frac{y_2 - 12}{x_2 - 10}$$

$$\frac{-8}{7} = \frac{y_2 - 12}{x_2 - 10}$$

$$-8 = y_2 - 12$$

$$-8 + 12 = y_2$$

$$\boxed{4 = y_2}$$

$$7 = x_2 - 10$$

$$7 + 10 = x_2$$

$$\boxed{17 = x_2}$$

$$(17, 4)$$

$$m = \frac{4 - 12}{17 - 10} = \frac{-8}{7}$$

Point B

$$m = \frac{6}{5}$$

$$6 = y_2 - 4$$

$$6 + 4 = y_2$$

$$\boxed{10 = y_2}$$

$$5 = x_2 - 17$$

$$5 + 17 = x_2$$

$$\boxed{22 = x_2}$$

$$(22, 10)$$

$$m = \frac{10 - 4}{22 - 17} = \frac{6}{5}$$

Point C

$$m = -\frac{2}{3}$$

$$-2 = y_2 - y_1$$
$$-2 = y_2 - 10$$

$$-2 + 10 = y_2$$

$$\boxed{8 = y_2}$$

$$3 = x_2 - x_1$$
$$3 = x_2 - 22$$

$$3 + 22 = x_2$$

$$\boxed{25 = x_2}$$

(25, 8)

$$m = \frac{8 - 10}{25 - 22} = \frac{-2}{3}$$

Point D

$$m = -\frac{2}{5}$$

$$-2 = y_2 - y_1$$
$$-2 = y_2 - 8$$

$$-2 + 8 = y_2$$

$$\boxed{6 = y_2}$$

$$5 = x_2 - x_1$$
$$5 = x_2 - 25$$

$$5 + 25 = x_2$$

$$\boxed{30 = x_2}$$

(30, 6)

$$m = \frac{6 - 8}{30 - 25} = \frac{-2}{5}$$

Point E

$$m = -\frac{4}{1}$$

$$-4 = y_2 - y_1$$
$$-4 = y_2 - 6$$

$$-4 + 6 = y_2$$

$$\boxed{2 = y_2}$$

$$1 = x_2 - x_1$$
$$1 = x_2 - 30$$

$$1 + 30 = x_2$$

$$\boxed{31 = x_2}$$

(31, 2)

$$m = \frac{2 - 6}{31 - 30} = \frac{-4}{1}$$

Point F

$$m = -\frac{1}{6}$$

$$-1 = y_2 - y_1$$
$$-1 = y_2 - 2$$

$$-1 + 2 = y_2$$

$$\boxed{1 = y_2}$$

$$6 = x_2 - x_1$$
$$6 = x_2 - 31$$

$$6 + 31 = x_2$$

$$\boxed{37 = x_2}$$

(37, 1)

$$m = \frac{1 - 2}{37 - 31} = \frac{-1}{6}$$