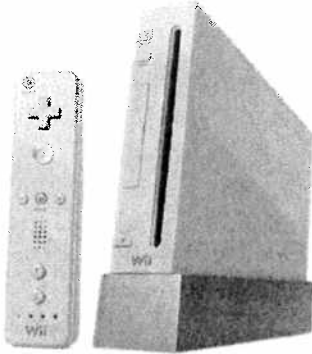


## 2. Equation of a Line:

Blockmuster is a store that rents the Wii playstation to people. The cost is based on an initial membership fee that is fixed and another cost based on the number of days the Wii is rented.

If 12 days of Wii rentals cost \$92.60 and 6 days of Wii rentals cost \$53.48, how much is the membership fee and how much is the daily rental fee?



Explain your thoughts

This will be two points on a straight line

$(12, 92.60)$  &  $(6, 53.48)$

- $x$  (independent) = number of days
- $y$  (dependent) = total cost (\$)
- slope = cost per day
- $y$  int = membership cost

if in doubt, define everything!

Title

Find slope (cost per day)

$$\begin{aligned} m &= \frac{y_1 - y_2}{x_1 - x_2} \\ &= \frac{92.60 - 53.48}{12 - 6} \\ &= \frac{39.12}{6} \\ &= \$6.52/\text{day} \end{aligned}$$

Find  $y$  int (membership)

$$\begin{aligned} y &= mx + b \\ 92.60 &= 6.52(12) + b \\ 92.60 &= 78.24 + b \\ \$14.36 &= b \end{aligned}$$

equation

clear sub in

units!

$\therefore$  The initial membership fee is \$14.36 and the cost per day is \$6.52/day.

conclusion