| Example: | $y=2 x-3$ | Find the average rate of change from $x=1$ to $x=3$. |  |
| :--- | :--- | :--- | :--- |
| Solution: | When $x=1:$ | When $x=3:$ | Coordinates are: $\left(x_{1}, y_{1}\right)=(1,-1)$ |
|  | $y=2(1)-3$ | $y=2(3)-3$ | $\left(x_{2}, y_{2}\right)=(3,3)$ |
|  | $y=6-3$ | $=\frac{3-(-1)}{3-1}$ |  |
|  | $y=2-3$ | $y=3$ | $=\frac{4}{2}$ |
|  | $y=-1$ |  | $=2$ |

1. $\mathrm{y}=\mathrm{x}^{2}+1$

Find the average rate of change from $x=-1$ to $x=3$.
2. $y=(x+1)(x-2) \quad$ Find the average rate of change from $x=1$ to $x=3$.
3. $h=-2 t^{2}+6 t \quad$ Find the average rate of change from:
a) $t=1$ to $t=3$
b) $t=0$ to $t=2$
4. $\mathrm{C}=-3 \mathrm{~A}+5 \quad$ Find the average rate of change from $\mathrm{A}=1$ to $\mathrm{A}=3$.
5. $\mathrm{P}=10 \mathrm{~h}+3 \quad$ Find the average rate of change from $\mathrm{h}=0$ to $\mathrm{h}=8$.
6. $h=-2 t^{2}+3 t+1 \quad$ Find the average rate of change from:
a) $t=3$ to $t=5$
b) $\mathrm{t}=0$ to $\mathrm{t}=2$
7. $y=x^{3}+2$

Find the average rate of change from:
a) $x=0$ to $x=2$
b) $x=-1$ to $x=1$
Absolute Value
8. $\mathrm{y}=\tilde{|x|}+2$

Find the average rate of change from $\mathrm{x}=-3$ to $\mathrm{x}=-1$.

