

7.2 Ex 5 Finding 1st term of arithmetic sequence ①

$$a_8 = -16$$

$$a_{16} = -40$$

$a_1$                        $a_8$                        $a_{16}$   
                                 -16                                      -40

$$-40 - (-16) = -40 + 16 = -24$$

$$16 - 8 = 8 \text{ steps}$$

$$\frac{-24}{8} = -3 = d$$

Find  $a_1$

$$a_n = a_1 + (n-1)d$$

$$a_8 = a_1 + (8-1)(-3)$$

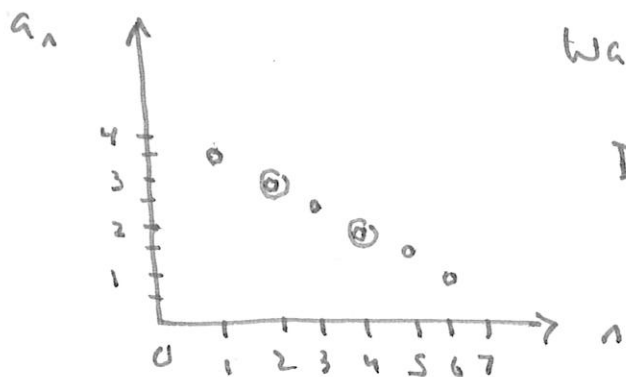
$$-16 = a_1 + (7)(-3)$$

$$-16 = a_1 - 21$$

$$\begin{array}{r} +21 \\ \hline 5 = a_1 \end{array}$$

7.2 **EX 6** Find  $n$ th term from Graph

(2)



$$\text{Want } a_n = a_1 + (n-1)d$$

Domain and Range

$$a_1 = ?$$

$$d = ?$$

$$a_1 = 3.5$$

$$d = -0.5$$

$$a_n = 3.5 + (n-1)(-0.5)$$

$$a_n = 3.5 - 0.5n + 0.5$$

$$\boxed{a_n = -0.5n + 4}$$

$$y = mx + b$$

$$\text{slope: } \frac{y_2 - y_1}{x_2 - x_1}$$

point (2, 3)

point (4, 2)

$$m = \frac{2-3}{4-2} = \frac{-1}{2}$$

b is y-intercept

Domain:  $\{1, 2, 3, 4, 5, 6\}$

Range:  $\{1, 1.5, 2, 2.5, 3, 3.5\}$