

## Examples from Review Assignment:

$$\underline{a_1} = 25 \quad a_n = a_{n-1} - 12, \quad n \geq 2$$

$$a_2 = a_{2-1} - 12$$

$$a_2 = a_1 - 12$$

$$a_2 = 25 - 12$$

$$a_2 = 13$$

$$a_1 = \frac{2}{3}, \quad a_n = \frac{1}{3}a_{n-1} - \frac{2}{9}, \quad n \geq 2$$

$$\begin{aligned} a_2 &= \frac{1}{3}\left(\frac{2}{3}\right) - \frac{2}{9} \\ &= \frac{2}{9} - \frac{2}{9} \end{aligned}$$

$$a_2 = 0$$

$$\begin{aligned} a_3 &= \frac{1}{3}(0) - \frac{2}{9} \\ a_3 &= -\frac{2}{9} \end{aligned}$$

$$\begin{aligned} a_4 &= \frac{1}{3}\left(-\frac{2}{9}\right) - \frac{2}{9} \\ &= -\frac{2}{27} - \frac{2}{9} - \frac{6}{27} \end{aligned}$$

$$a_4 = -\frac{8}{27}$$

$$\begin{aligned} a_5 &= \frac{1}{3}\left(-\frac{8}{27}\right) - \frac{2}{9} \\ &= -\frac{8}{81} - \frac{2}{9} - \frac{18}{81} \\ &= -\frac{26}{81} \end{aligned}$$

$$80, -40, 20, -10, \dots$$

$$\frac{-40}{-80} \quad \frac{20}{-40} \quad \frac{-40}{80}, \quad \frac{20}{-40}, \quad \frac{-10}{20}$$
$$= -\frac{1}{2} \quad = -\frac{1}{2} \quad = -\frac{1}{2} \quad = -\frac{1}{2} \quad = -\frac{1}{2}$$

$$a_n = a_{n-1} \cdot -\frac{1}{2}$$

$$a_n = -\frac{1}{2}(a_{n-1}); n \geq 2$$