

1.- Find out the general term and a_{10} in a geometric progression with $a_2 = 2$ and $a_4 = \frac{1}{2}$

$$a_4 = a_2 \cdot r^2$$

$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}} \cdot \underline{\hspace{2cm}}^2$$

$$r^2 = \pm \sqrt{\underline{\hspace{2cm}}} = \pm \underline{\hspace{2cm}}$$

$$= a_1 \cdot \underline{\hspace{2cm}} \Rightarrow a_1 =$$

$$a_n = \underline{\hspace{2cm}} \cdot \left(\underline{\hspace{2cm}} \right)$$

$$a_{10} = \underline{\hspace{2cm}} \cdot \left(\underline{\hspace{2cm}} \right) = \underline{\hspace{2cm}}$$

2.- Find the sum of the first 10 terms of the following progression:

2; 3; 4; 5; 6; 75; 10; 125; ...

$$r = \underline{\hspace{2cm}} =$$

$$S_{10} = \underline{\hspace{2cm}} \cdot \left(\frac{\underline{\hspace{2cm}} - 1}{\underline{\hspace{2cm}} - 1} \right) =$$

3.- Calculate :

$$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \dots = S_{\infty} = \frac{\underline{\hspace{2cm}}}{\underline{\hspace{2cm}} - \underline{\hspace{2cm}}} =$$