

$$y = -4.5(3)$$

$$y = -\frac{27}{2}$$

So, (a)

4. after 1 hour:

$$\text{nb. of bacteria} = \left(1 + \frac{10}{100}\right) \times \underbrace{1000}_{\text{original amount of bacteria}}$$

$$= 1.1 \times 1000$$

$$= 1100$$

after 2 hours:

$$\text{nb. of bacteria} = \left(1 + \frac{10}{100}\right) \times 1100$$

$$= 1.1 \times 1100$$

$$= 1210$$

So, (b)

5. In Δ 's OAB & OCD we have:

$(AB) \parallel (CD)$ (given)

O belongs to $[AD]$ & $[BC]$ (given)

So, Apply Thales' property: Any st. line parallel to a side of a Δ , it divides the sides of the Δ proportionally.

$$\text{Ratios: } \frac{\textcircled{1} OB}{\textcircled{2} OC} = \frac{\textcircled{3} OA}{\textcircled{4} OD} = \frac{\textcircled{5} AB}{\textcircled{6} CD}$$

$$BC = BO + OC \quad (\text{B, O, C are collinear})$$

$$4 = BO + 1$$

$$BO = 3 \text{ cm}$$

From ratios $\textcircled{1}$ & $\textcircled{3}$

$$\frac{OB}{OC} = \frac{AB}{CD}$$

$$\frac{3}{1} = \frac{6}{CD}$$

P-2.