



$$a \quad A = P \left(1 + \frac{r}{100}\right)^n \quad r = 6 \quad P = 1000$$

$$n = 1$$

$$A = 1000(1.06)$$

$$= \$1060$$

$$\text{Amount after prize bought} = \$1060 - \$72$$

$$= \$988$$



b time for bus to travel from D to P

$$D \text{ to } G = 2000 \text{ m}$$

$$\text{at } 15 \text{ m s}^{-1}$$

$$\therefore t = 133 \frac{1}{3} \text{ second (from D to G)}$$

$$G \text{ to } P = \tan \theta = \frac{GP}{250}$$

$$\therefore 250 \tan \theta = GP$$

$$GP = 89.8$$

$$\text{at } 15 \text{ m s}^{-1}$$

$$\therefore t = 6 \text{ seconds (correct to nearest no.)}$$

$$\text{time (s)} = \frac{2000 + 250 \tan \theta}{15}$$

from f to P

$$\cos \theta = \frac{250}{FP}$$

$$\therefore \text{time (s)} = \frac{250 \div \cos \theta}{4}$$

$$\text{ii } t = 133 \frac{1}{3} + 5 \frac{74}{75}$$

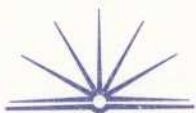
$$= 139.32 \text{ seconds}$$

$$= 2 \text{ hours } 19 \text{ minutes}$$

$$= \frac{139.8}{3600} \text{ hours}$$

$$\therefore \text{bus take } 0.0387 \text{ hours}$$

$$\therefore \text{latest time } \therefore \text{bus arrives at } 10:19$$



$$\text{time} = \frac{250 \div \cos \theta}{g}$$