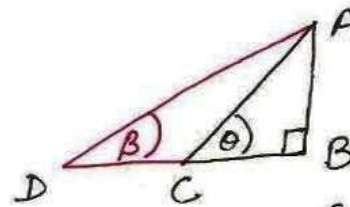


⑦ AB represents tower,
BC, BD shadows

$\theta > \beta$
but $BC < BD$

\therefore false



⑧ $DE = CD = (h+3)m$

[distance of object
= distance of image]

$$\tan \alpha = \frac{h}{x} \dots \textcircled{i}$$

$$\tan \beta = \frac{h+6}{x} \dots \textcircled{ii}$$

from \textcircled{i} and \textcircled{ii}

$$\tan \alpha \neq \tan \beta$$

$$\Rightarrow \alpha \neq \beta$$

\therefore false

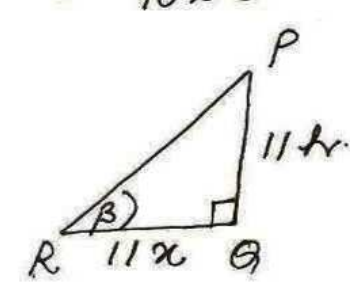
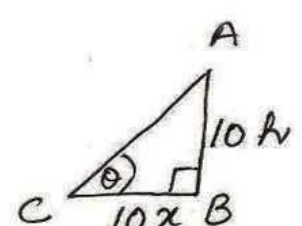
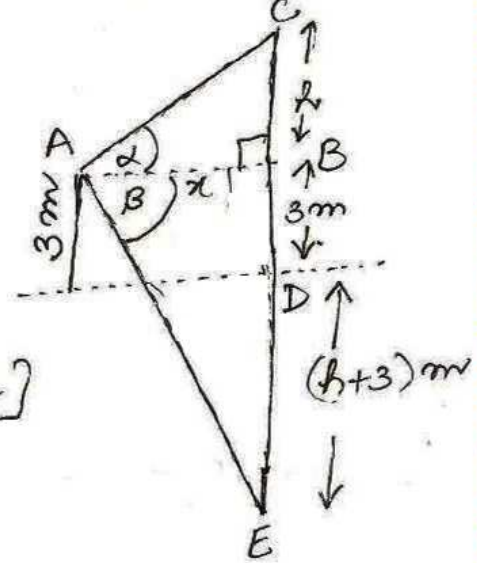
⑫ In rt ΔABC

$$\begin{aligned} \tan \theta &= \frac{10h}{10x} \\ &= \frac{h}{x} \end{aligned}$$

$$\begin{aligned} \text{In rt } \Delta PQR, \tan \beta &= \frac{11h}{11x} \\ &= \frac{h}{x} \end{aligned}$$

$$\therefore \tan \theta = \tan \beta$$

$$\Rightarrow \theta = \beta \therefore \text{true}$$



NCERT Exemplar Solutions by Dev Anoop (Bathinda) Ch. Appl. of Trigonometry Ex 8.2