

b. In Δ OIG & OBS: sharing same vertex O
(IG) || (SB) (proved)

G & I belong to [OS] & [OB] resp (given)

$$\text{Then, } \frac{OG}{OS} = \frac{OI}{OB} = \frac{IG}{SB}$$

using ratios 2 & 3

$$\frac{IG}{SB} = \frac{IG}{SB}$$

$$\frac{1}{2} = \frac{IG}{6}$$

$$IG = 2 \text{ cm} \quad \checkmark$$

Since I is a fixed pt
& $GI = 2 \text{ cm}$ (proved)
which is constant.

Thus, as M moves on (T), Q will describe a circle
of fixed center I & constant radius, $IG = 2 \text{ cm}$.

