

Steps:
(1) Cosine law to find $\angle A$
(2) $\sin (A)=\frac{\text { opp }}{\text { hyp }}$ to find the height
(3) Area = $\frac{1}{2}$ basexheight.

(3) Area: $\frac{1}{2} \times 9 \times h$
(1) $a^{2}=b^{2}+c^{2}-2 b c \cos A$

$$
=4.5 h
$$

$$
8^{2}=7^{2}+9^{2}-2 \times 7 \times 9 \times \cos A
$$

$\hat{\imath} \begin{aligned} & \approx 4.5 \\ & \approx 4.5 \times 5.96 \\ & \approx 26.8 \mathrm{~cm}^{2}\end{aligned}$

$$
\begin{aligned}
2 \times 7 \times 9 \times \cos A & =7^{2}+9^{2}-8^{2} \\
\cos A & =\frac{7^{2}+9^{2}-8^{2}}{2 \times 7 \times 9} \\
A & =\cos ^{-1}\left(\frac{7^{2}+9^{2}-8^{2}}{2 \times 7 \times 9}\right)
\end{aligned}
$$

(2) $\sin A=\frac{h}{7} \approx 58.41^{\circ}$

$$
\begin{aligned}
h & =7 \times \sin 58.41^{\circ} \\
& \approx 5.96 \mathrm{~cm}
\end{aligned}
$$

