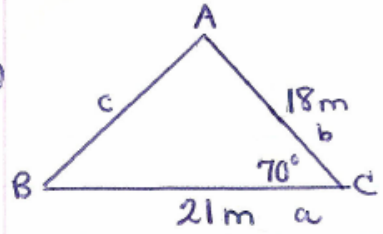
ANSWERS ⇝ Area of a Triangle Worksheet

①



$$A = \frac{1}{2} bc \sin A$$

$$\downarrow$$

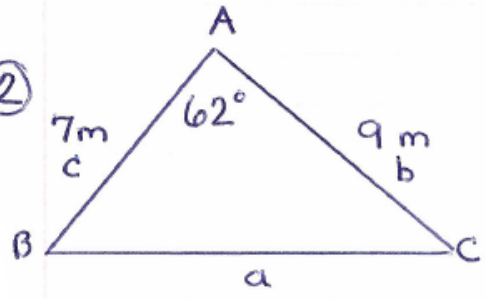
$$A = \frac{1}{2} ab \sin C$$

$$= \frac{1}{2}(21)(18)\sin 70°$$

$$= \frac{1}{2}(21)(18)(0.9397)$$

$$= 177.6\ m^2$$

②



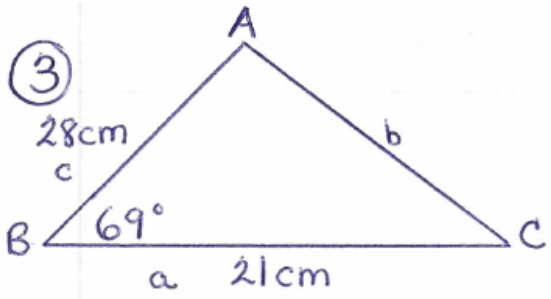
$$A = \frac{1}{2} bc \sin A$$

$$= \frac{1}{2}(9)(7)\sin 62°$$

$$= \frac{1}{2}(9)(7)(0.8829)$$

$$= 27.8\ m^2$$

③



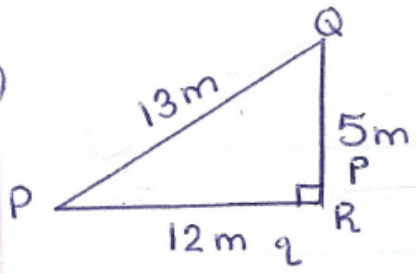
$$A = \frac{1}{2} ac \sin B$$

$$= \frac{1}{2} (21)(28) \sin 69°$$

$$= \frac{1}{2} (21)(28)(0.9336)$$

$$= 274.5 \text{ cm}^2$$

④



② $A = \frac{1}{2}bh$

$= \frac{1}{2}(12)(5)$

$= 30\,m^2$

You can use both methods!

① $A = \frac{1}{2}pq\sin R$

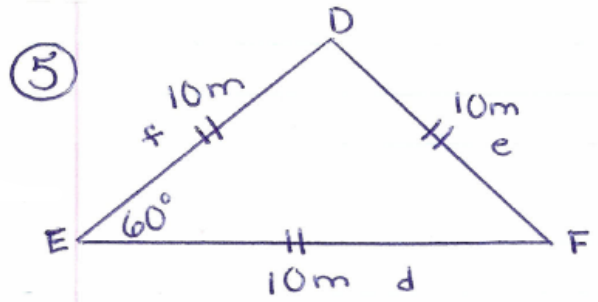
$= \frac{1}{2}(5)(12)\sin 90°$

$= \frac{1}{2}(5)(12)(1.0000)$

$= \frac{1}{2}(60)$

$= 30\,m^2$

⑤



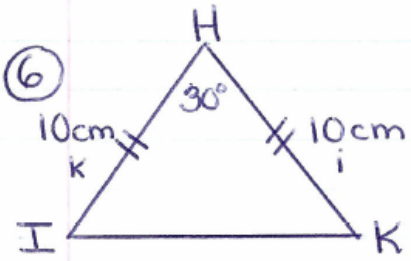
$$A = \frac{1}{2} df \sin E$$

$$= \frac{1}{2}(10)(10)\sin 60°$$

$$= \frac{1}{2}(10)(10)(0.8660)$$

$$= 43.3\ m^2$$

⑥



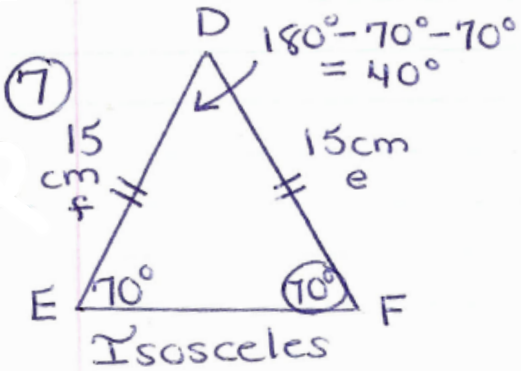
$$A = \frac{1}{2} iK \sin H$$

$$= \frac{1}{2}(10)(10)\sin 30°$$

$$= \frac{1}{2}(10)(10)(0.5000)$$

$$= 25\ cm^2$$

(7)



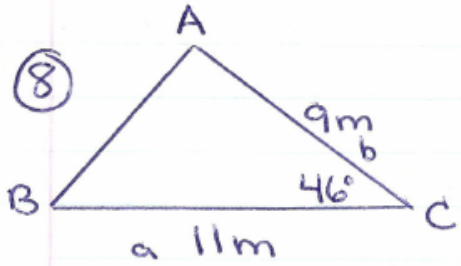
$$A = \frac{1}{2} ef \sin D$$

$$= \frac{1}{2}(15)(15)\sin 40°$$

$$= \frac{1}{2}(15)(15)(0.6428)$$

$$= 72.3\ cm^2$$

(8)



$$A = \frac{1}{2} ab \sin C$$

$$= \frac{1}{2}(11)(9)\sin 46°$$

$$= \frac{1}{2}(11)(9)(0.7193)$$

$$= 35.6\ m^2$$