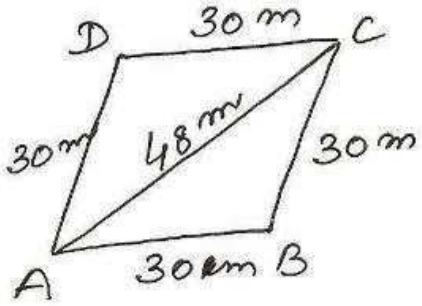
ex 12.2 herons formula ✕

⑤



ΔABC

$s = \frac{a+b+c}{2}$

$= \frac{30+30+48}{2}$

$= \frac{108}{2}$

$= 54 \text{ m}$

area of ΔABC

$= \sqrt{s(s-a)(s-b)(s-c)}$

$= \sqrt{54(54-30)(54-30)(54-48)}$

$= \sqrt{54 \times 24 \times 24 \times 6}$

$= 24\sqrt{3 \times 3 \times 6 \times 6}$

$= 24 \times 3 \times 6$

$= 432 \text{ m}^2$

area of rhombus

$= 2 \text{ ar}(\Delta ABC)$

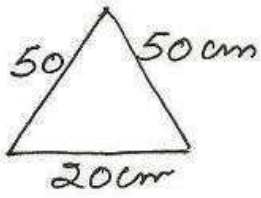
$= 2 \times 432$

$= 864 \text{ m}^2$

area I cow can graze $= \frac{864}{18}$

$= 48 \text{ m}^2$

⑥



$s = \frac{a+b+c}{2}$

$= \frac{20+50+50}{2}$

$= \frac{120}{2}$

$= 60 \text{ cm}$

area of 1 triangular piece.

$= \sqrt{s(s-a)(s-b)(s-c)}$

$= \sqrt{60(60-20)(60-50)(60-50)}$

$= \sqrt{60 \times 40 \times 10 \times 10}$

$= \sqrt{6 \times 10 \times 4 \times 10}$

$= 10 \times 10\sqrt{2 \times 3 \times 2 \times 2}$

$= 100\sqrt{6} \text{ cm}^2$

NCERT solutions by Dev Anoop (Bathinda)