

FEB 23/09

HERON'S FORMULA

Ex. FIND THE AREA OF A
TRIANGLE WITH THE FOLLOWING
SIDES 7, 24, 25 cm

$$S = \frac{a+b+c}{2} = \frac{7+24+25}{2} = \frac{56}{2} = 28$$

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

$$A = \sqrt{28(28-7)(28-24)(28-25)}$$

$$A = \sqrt{28 \cdot 21 \cdot 4 \cdot 3}$$

$$A = \sqrt{7056}$$

$$A = 84 \text{ cm}^2$$

E6 FIND THE AREA OF TRIANGLE
WITH THE FOLLOWING SIDES
3, 6 & 5 cm

$$S = \frac{a+b+c}{2} = \frac{3+6+5}{2} = \frac{14}{2} = 7$$

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

$$A = \sqrt{7(7-3)(7-6)(7-5)}$$

$$A = \sqrt{7(4)(1)(2)}$$

$$A = \sqrt{56}$$

$$A = 7.48 \text{ cm}^2$$

FIND THE AREA OF A TRIANGLE
WITH THE FOLLOWING SIDES

$$7, 2 \text{ \& } 11 \text{ cm}$$

$$S = \frac{a+b+c}{2} = \frac{7+2+11}{2} = \frac{20}{2} = 10$$

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

$$A = \sqrt{10(10-7)(10-2)(10-11)}$$

$$A = \sqrt{10 \cdot 3 \cdot 8 \cdot -1}$$

$$A = \sqrt{-240}$$

$$A = ?$$

IF THE ANSWER COMES OUT TO
THE SQUARE ROOT OF A NEGATIVE
NUMBER, THERE IS NO ANSWER