Solution

Using Heron's formula

$$S = \sqrt{p \times (p-a) \times (p-b) \times (p-c)},$$

where $a = 27, b = 27, c = 12, p = \frac{a+b+c}{2} = 33.$

$$S = \sqrt{33 \times (33-27) \times (33-27) \times (33-12)} = \sqrt{33 \times 6 \times 6 \times 21} = \sqrt{24948} = 157{,}9$$

Answer: the area of triangle is 157,9 yd.