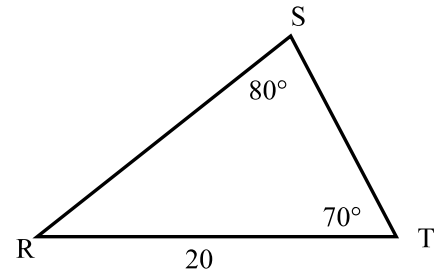


1. If the first term of an arithmetic progression is 8 and the 13th term is 80 find the 30th term.

2. Express 270° in radian measure.

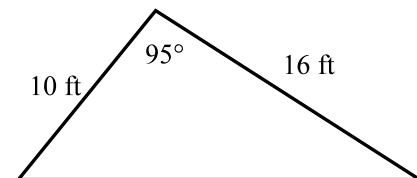
3. An arch is modeled by the equation $y = -2x^2 + 8x + 20$. What is the maximum height of the arch?

4. Find RS in the triangle below to the nearest tenth..



5. If $\sin x = -\frac{\sqrt{3}}{2}$, what is (are) the value(s) of x if $0^\circ \leq x \leq 360^\circ$?

6. Find the area of the triangle below to the nearest foot



7. Factor: $8x^3 - 27y^3$.

8. Find to the nearest hundredth $\log_4 25$.

9. Solve for x : $x^{\frac{2}{3}} + x^{\frac{1}{3}} = 12$.

10. A merchant wishes to mix walnuts costing \$14 per pound with almonds costing \$20 per pound to create 12 pounds of a mix costing \$17.50 per pound. How many pounds of each must he use?

11. Solve for x : $2\sin^2 x - 3 \sin x + 1 = 0$ for $0^\circ \leq x \leq 360^\circ$.