Answer on question 34176 – Math – Geometry
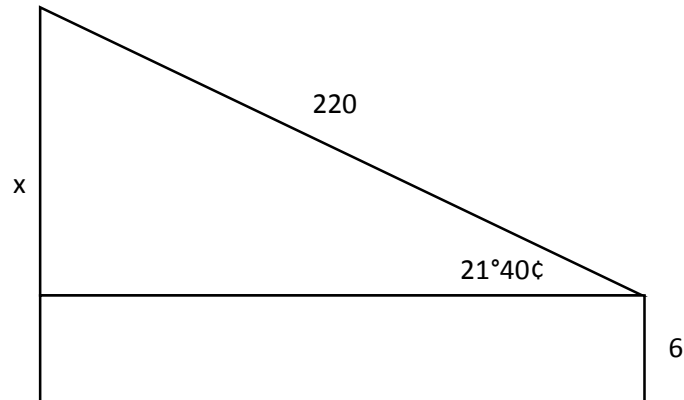
A kite is held fast by a taut line 220 feet long. If the line makes an angle of 21°40¢ with the horizontal, how high is the kite above the ground when its line is fastened to a post 6 feet above the ground?

Solution

The height is x+6. Using the definition of sine we can find the x from the right triangle

$$x = 220 \sin 21°40 \approx 81.23.$$

Therefore, $h = x + 6 \approx 87.23$ feet.

Answer: 87.23 feet.