

1. a) List the Fundamental Identity from trig (also called the Pythagorean Identity) using θ as your variable.

b) Divide all terms on both sides of this identity by $\cos^2 \theta$ and use quotient and reciprocal identities to express this identity without fractions.

c) Go back to the Fundamental Identity and divide all terms by $\sin^2 \theta$ and again use quotient and reciprocal identities to express this identity without fractions.
2. Take each identity in parts a-c above and express in two other forms solving for various trig functions.

3. Using the Pythagorean Theorem, express the missing side of each right triangle in terms of the other two sides. Then write a trig function of θ that relates the two simplest sides and solve it for x .

