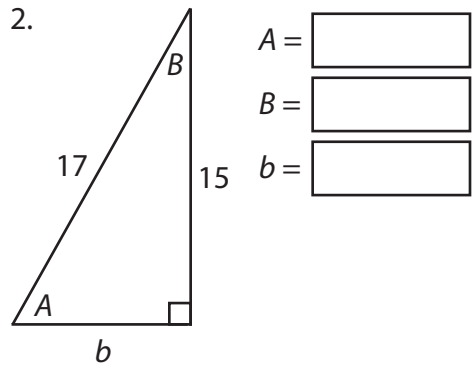
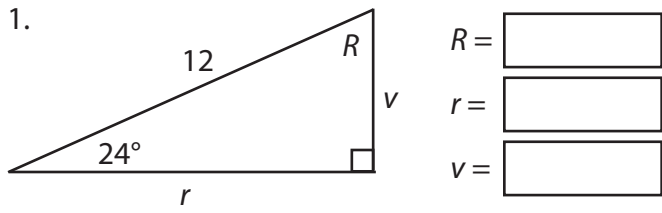


[D] Solve each triangle, starting by writing a trigonometric equation. Neatly show every step using equations only, with a variable in each equation. Round each answer to the nearest hundredth.



[E] Sketch the situation approximately to scale. Then write a trigonometric equation and solve it. Neatly show every step using equations only, with a variable in each equation. Round each answer to the nearest tenth.

1. What angle does a ramp make with the ground if it is 240 cm long and reaches a height of 45 cm?

2. How long does a ladder need to be to reach 5 meters up a wall if it makes a 20° angle with the wall?

[F] Optional.

1. Use the definitions to simplify the following. The secant function is defined as $\sec = \frac{\text{hypotenuse}}{\text{adjacent}}$.

- a) $(\cos A)(\sec A)$
- b) $(\sin A)^2 + (\cos A)^2$