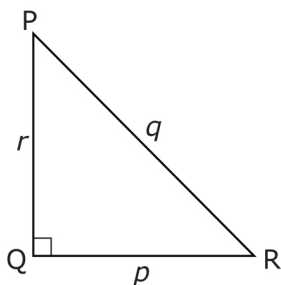


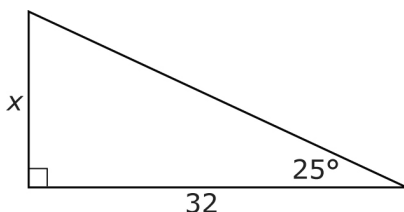
Section 7.1 Extra Practice

1. **a)** Write the tangent ratio for $\angle P$.
b) Write the sine ratio for $\angle R$.
c) Write the cosine ratio for $\angle R$.

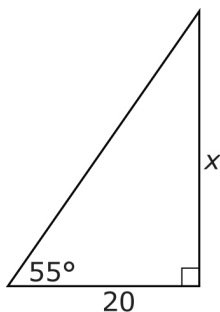


2. Use the tangent ratio to determine the length of the indicated side, to the nearest whole unit.

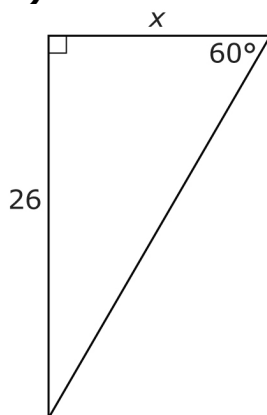
a)



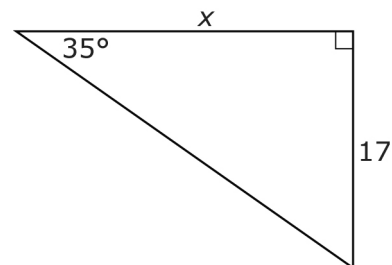
b)



c)

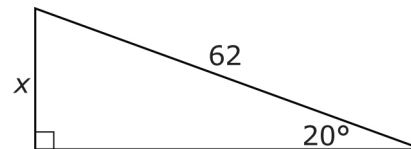


d)

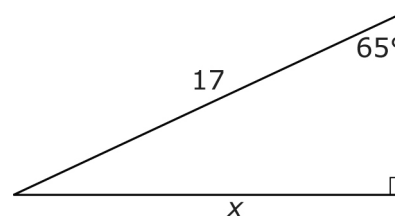


3. Create a right triangle, $\triangle MNO$, where $\angle N$ is the right angle.
a) Label the sides opposite and adjacent to $\angle M$.
b) Write the sine ratio of $\angle M$.
c) Write the cosine ratio of $\angle M$.
4. What is the length of each indicated side, to the nearest whole unit?

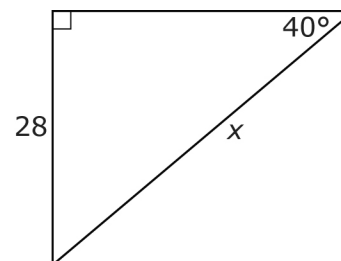
a)

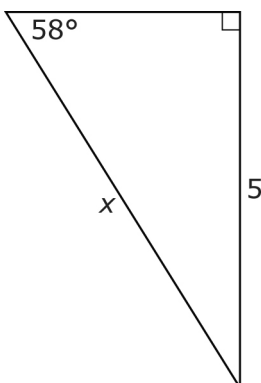
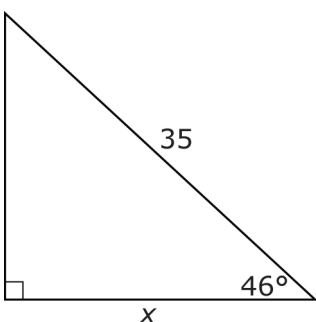


b)

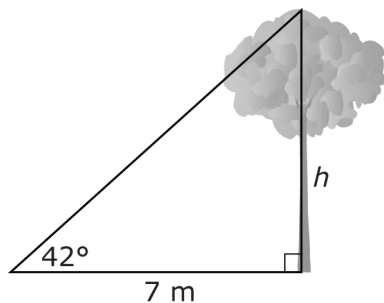


c)



d)**e)**

- 5.** What is the height of the tree, to the nearest tenth of a metre?



- 6.** A wind storm causes a 12-m telephone pole to break and lean over. The top of the pole is 11.4 m from the ground. What angle does the bottom of the pole make with the ground, to the nearest degree?
- 7.** A guy wire that is 25 m long supports a tower and forms an angle of 65° with the ground. How far is the tower base from the guy wire attachment on the ground, to the nearest tenth of a metre?
- 8.** Tim has a 4-m long ladder that he wants to use to repair the eaves troughs on his garage. The eaves troughs are 4.75 m above the ground. To be used safely, the foot of the ladder must form a 75° angle with the ground.
- a)** Sketch the scenario.
 - b)** How high will the ladder reach, if it is used safely?
 - c)** What length of ladder does Tim need to repair his eaves troughs?

