MATH 110 ASSIGNMENT 2B - TANGENT

1. Practice p 312 # 1a,b, 2b, 4

2. Handout BLM 7 -03 (Section 7.1 Extra Practice)
1a, 2a, 2b, 2c, 2d,

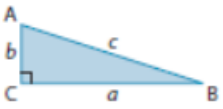
Check Your Understanding

Try It

1. Write the tangent ratio for each angle.

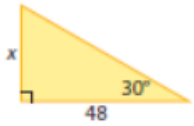
a) $\angle A$

b) $\angle B$

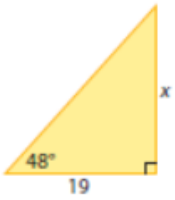


2. Calculate the length of each side x, using the tangent ratio. Express your answer to the nearest tenth of a unit.

a)

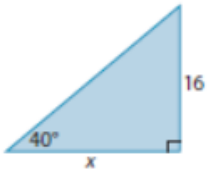


b)

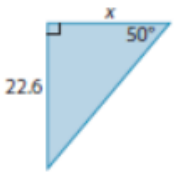


3. Estimate the length of each indicated side. Then, calculate, to the nearest tenth of a unit.

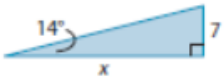
a)



b)

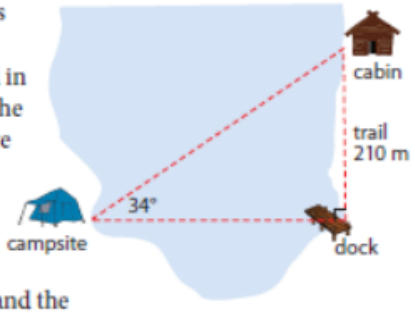


c)



Apply It

4. Nicholas is a scout leader. His scout troop is camping along the banks of Northwest Pond in Camp Nor'Wes, NL. Across the pond from the campsite, there is a dock and a walking trail. The trail leads to cabins where another troop is staying. If the cabins are at a 34° angle from the campsite and the trail is 210 m long, what is the distance across the pond from the campsite to the dock, to the nearest metre?

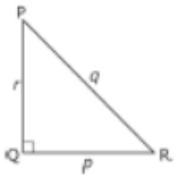


Name: _____ Date: _____

BLM 7–3

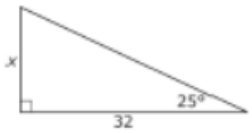
Section 7.1 Extra Practice

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



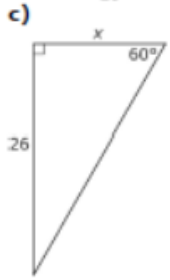
2. Use the tangent ratio to determine the length of the indicated side, to the nearest whole unit.

a)

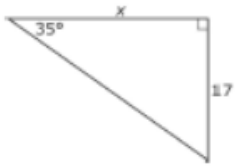


b)

c)



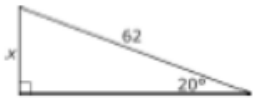
d)



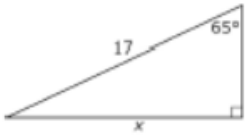
3. Create a right triangle, ΔMNO, where ∠N is the right angle.
a) Label the sides opposite and adjacent to ∠M.
b) Write the sine ratio of ∠M.
c) Write the cosine ratio of ∠M.

4. What is the length of each indicated side, to the nearest whole unit?

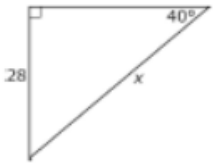
a)



b)



c)



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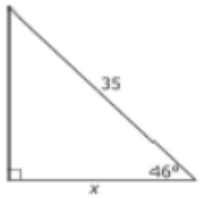
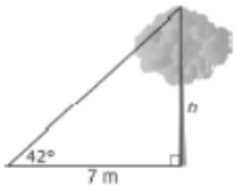
BLM 7-3
(continued)

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?

Attachments

- Homer about Triangles
- Sesame Triangle is Right
- Right Angle Trig