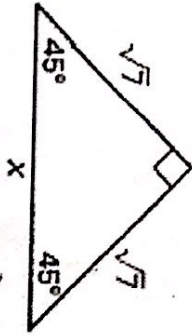


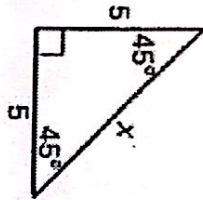
Station 1: 45-45-90 Triangles

Find the length of x and y in the 45-45-90 triangles below. Show all work on NBP. Round to tenths.

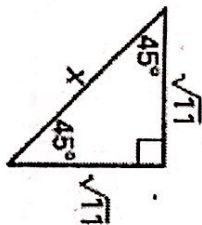
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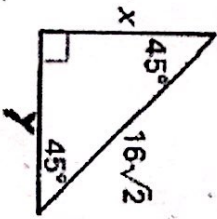
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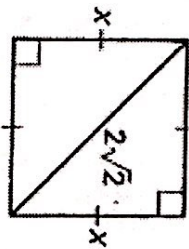
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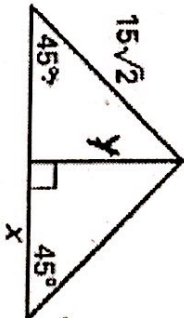
6.



7.



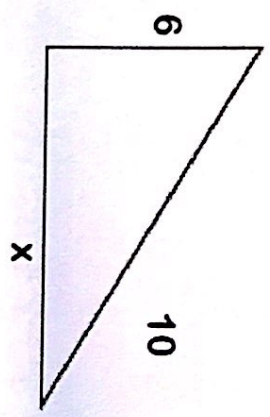
8.



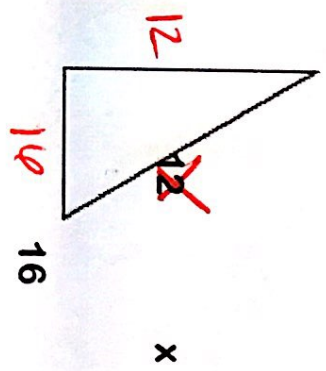
Station 2: Pythagorean Theorem

Find the missing sides using Pythagorean Theorem. **Angles are right as they appear.

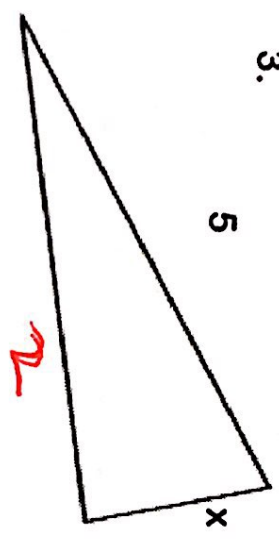
1.



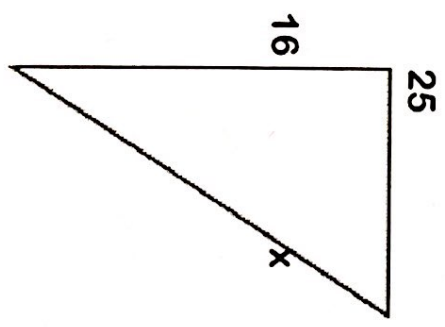
2.



3.



4.

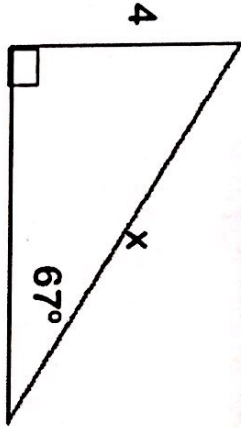


5. $a = 3, b = 4, c = ?$

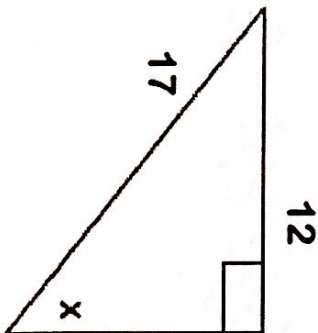
Station 3: SOH CAH TOA

Find the missing sides and/or angles using SOH CAH TOA. **Angles are right as they appear.

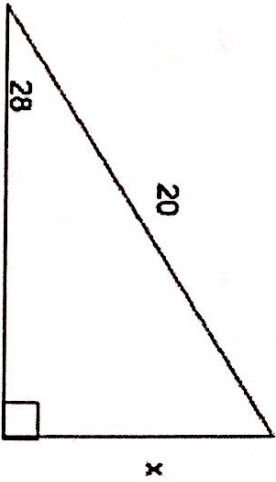
6.



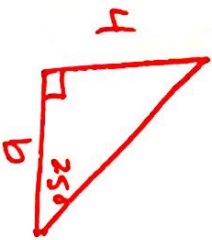
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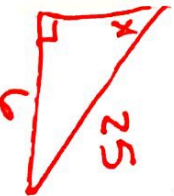
8.



9. $a = 4$, $\angle A = 25^\circ$, $\angle C = 90^\circ$, $b = ?$



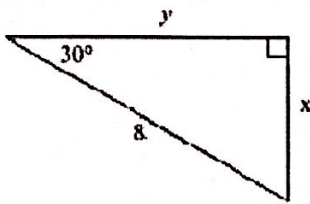
10. $b = 6$, $c = 25$, $\angle C = 90^\circ$, $\angle B = ?$



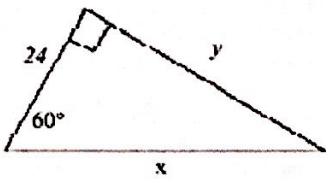
Station 4: 30-60-90 Triangles

Find the missing measures. Write all radicals in simplest form.

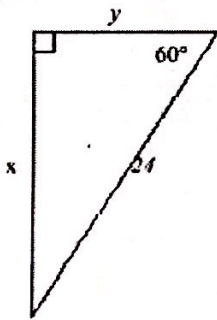
1.



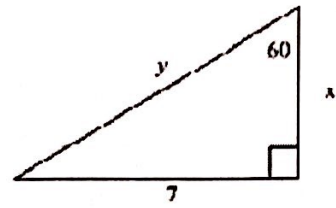
2.



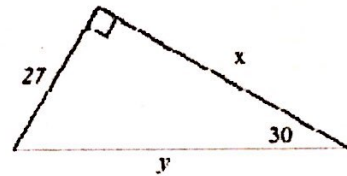
3.



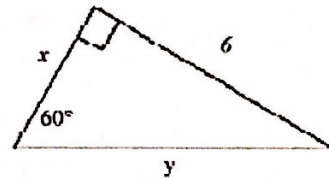
4.



5.



6.



~~*~~ Pick two

Station 5: Applications

Solve each of the following using Pythagorean Theorem, SOH CAH TOA, 45-45-90 rules, or 30-60-90 rules.

1. A man is lying on the beach, flying a kite. He holds the end of the kite string at ground level and estimates the angle of elevation of the kite to be 50° . If the string is 450 feet long, how high is the kite above the ground?
2. Find the altitude of an equilateral triangle with base 6 feet.
3. A builder wishes to construct a ramp 24 feet long that rises to a height of 5 feet above the ground. Find the angle of elevation of the ramp.
4. The area of a square garden is 25 square meters. The gardener is going to put a fence on the diagonal. How much fence does she need?

Station 6: Solving the entire right triangle.

2. You are standing in a forest. You can see 2 fire towers on either side of you. The angle of elevation to the top of the tower on your left is 34° . The angle of elevation to the top of the tower to your right is 27° . Both towers are 40 meters high.
- d. Find the distance between you and each of the towers, and the distance between the towers.
 - e. There is a forest ranger at the top of each tower. What are the distances between you and each of the forest rangers?
 - f. At what angle of depression is each ranger looking down at you from the top of the towers?

