

NAME:

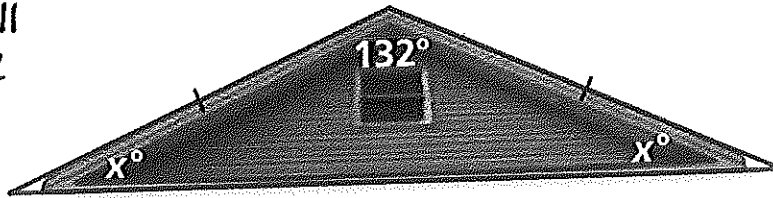
Answers

Getting Ready for Boot Camp

3: Triangles Quiz!

① What does x equal? It will have only one value.

(no protractor)

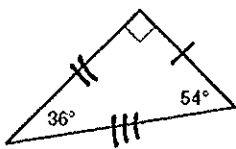


$$\begin{array}{r} 132 + x + x = 180 \\ -132 \qquad \qquad -132 \\ \hline \end{array}$$

$$x + x = 84 \quad \boxed{x = 42^\circ}$$

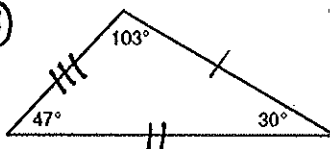
Classify each triangle by its angles & sides.

②



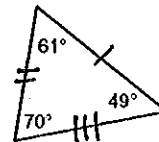
right; scalene

③



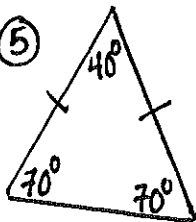
obtuse; scalene

④



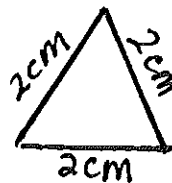
acute; scalene

⑤



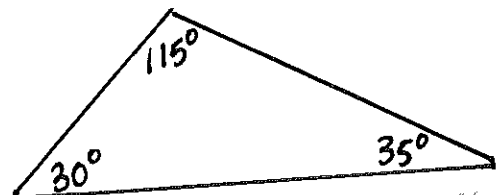
Isosceles; acute

⑥



equilateral
acute

⑦



obtuse; scalene
all angles different,
so all sides
diff.

8

Which of the following could represent the side lengths of a triangle? Check all that apply.

<input checked="" type="checkbox"/> 19, 11, 17
<input type="checkbox"/> 23, 28, 52
<input type="checkbox"/> 34, 9, 25
<input checked="" type="checkbox"/> 13, 22, 14

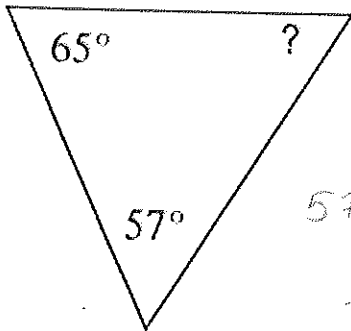
$$11 + 17 = 28 > 19$$

$$23 + 28 = 51 < 52$$

$$25 + 9 = 34 = 34$$

$$13 + 14 = 27 > 22$$

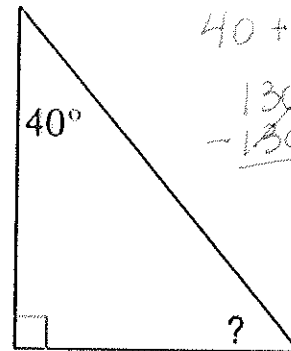
9 What does ? equal?
No Protractor.



$$57 + 65 + x = 180$$

$$\begin{array}{r} 122 + x = 180 \\ -122 \quad -122 \\ \hline x = 58^\circ \end{array}$$

10 What does ? equal?
No protractor.



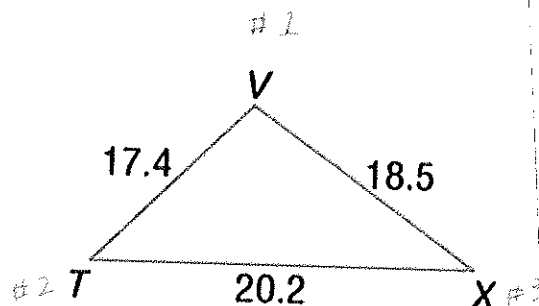
$$40 + 90 + x = 180$$

$$\begin{array}{r} 130 + x = 180 \\ -130 \quad -130 \\ \hline x = 50^\circ \end{array}$$

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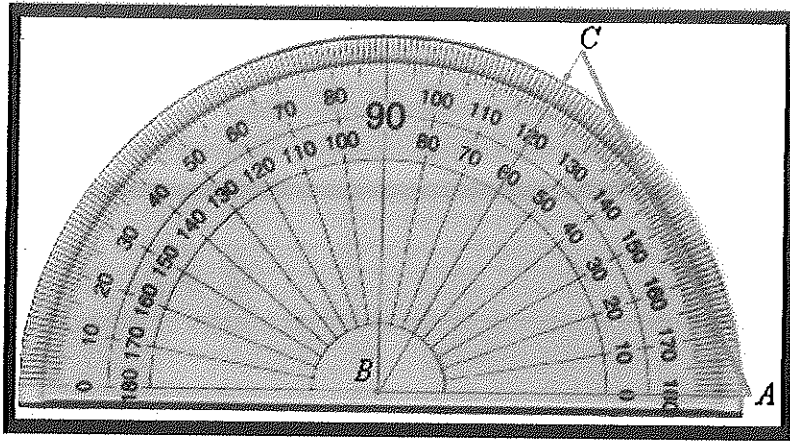
List the angles of the triangle in order from smallest to largest.

- A. $\angle T, \angle V, \angle X$
- B. $\angle V, \angle T, \angle X$**



Smallest $\angle \rightarrow$ across from shortest side.
Largest $\angle \rightarrow$ across from longest side.

Middle $\angle \rightarrow$ across from middle length side.



12) What is the measure of $\angle ABC$?

$$\angle ABC = 60^\circ$$

13)

A triangle has sides of 15 and 27. The measurement of the longest side is missing.

Ted says that one possibility for the unknown side length is 50. Do you agree with Ted? Why or why not?

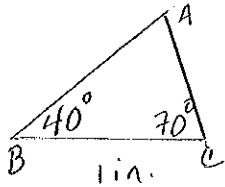
$$15 + 27 \text{ must be } > 50$$

$$42 \neq 50$$

I do not agree with Ted because the triangle inequality theorem states that the sum of the 2 shorter sides must be greater than the 3rd side.

⑭ Draw, using a protractor and ruler.

$\angle ABC = 40^\circ$, $\angle BCA = 70^\circ$, and $\overline{BC} = 1$ in.

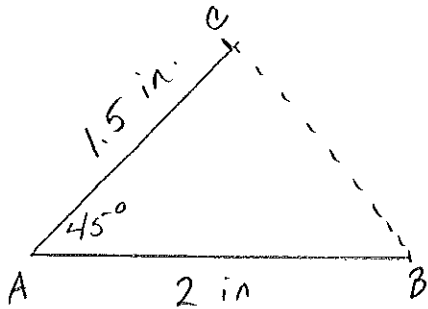


Is this unique? Why or why not?

yes, the 2 given angles determine the sides.

⑮ Draw, using a protractor and ruler.

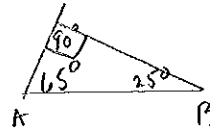
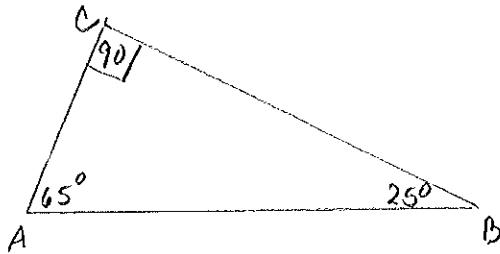
$\overline{AB} = 2$ in., $\angle CAB = 45^\circ$ and $\overline{AC} = 1.5$ in.



yes, because we were given 2 sides w/ an acute \angle between them. There is only 1 way to draw \overline{BC} .

Is this unique? Why or why not?

- (16) Draw, using a protractor and ruler.
 $\angle A = 65^\circ$, $\angle B = 25^\circ$, $\angle C = 90^\circ$

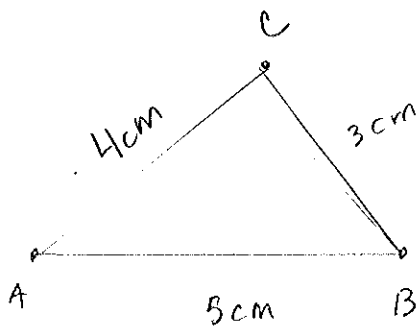


Is this unique? Why or why not?
No, the sides can be different lengths, making many diff Δ 's possible.

- (17) Draw, using a protractor and ruler:

ΔABC

$$\overline{AB} = 5\text{cm}, \overline{BC} = 3\text{cm}, \overline{AC} = 4\text{cm}.$$



Yes, only one triangle can be made when all three side lengths are given.

Is this unique? Why or why not?