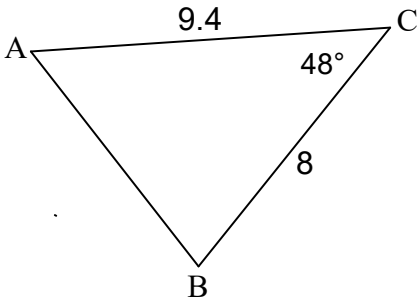
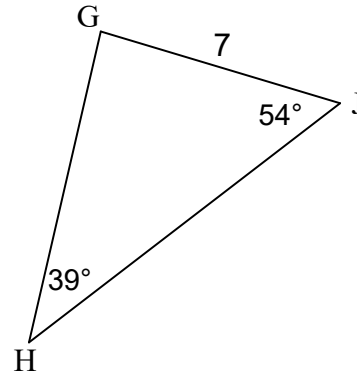


Solve the triangles. Round answers to the nearest tenth.

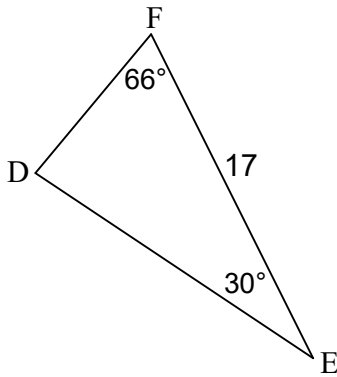
1.



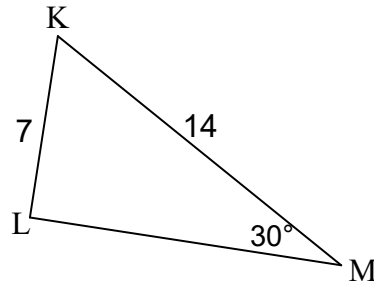
4.



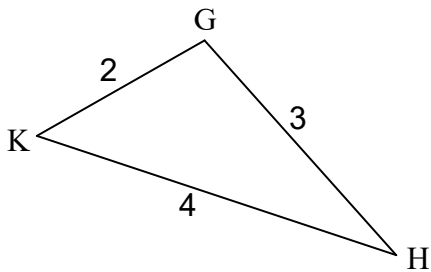
2.



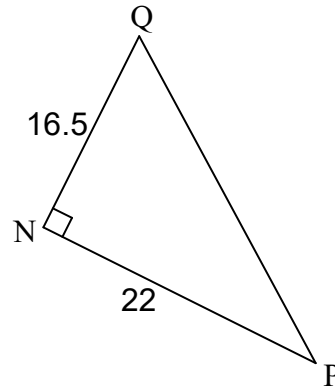
5.



3.

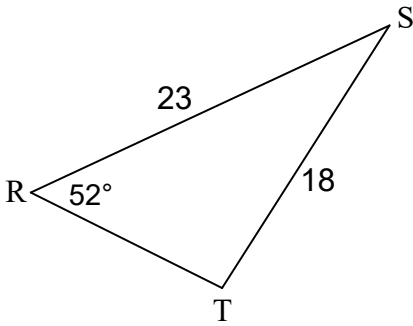


6.

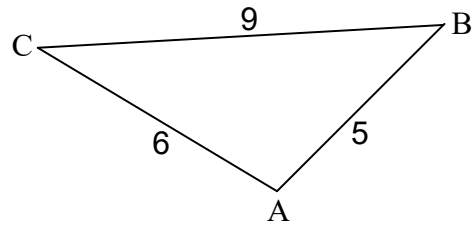


Solve the triangles. Round answers to the nearest tenth.

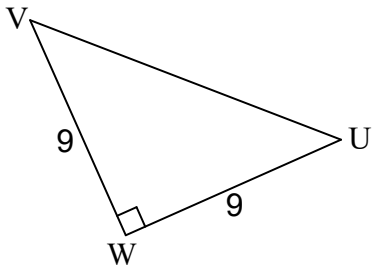
7.



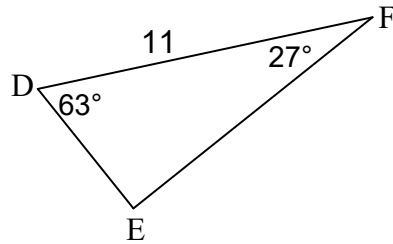
10.



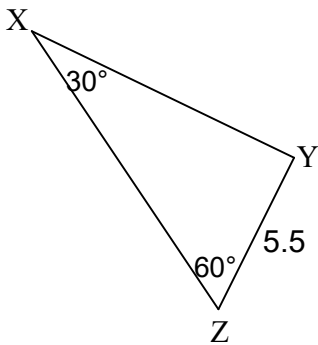
8.



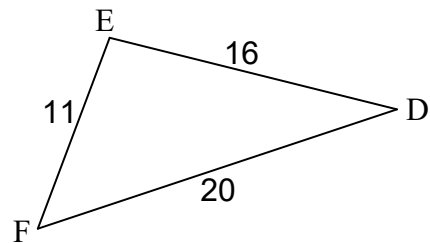
11.



9.



12.

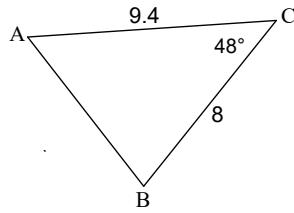


ANSWERS

per ___ date _____

Solve the triangles. Round answers to the nearest tenth.

1. $c^2 = 9.4^2 + 8^2 - 2 \cdot 9.4 \cdot 8 \cdot \cos 48^\circ$

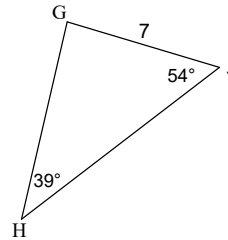


$c^2 \approx 51.7 \rightarrow c \approx 7.2$

$\frac{\sin A}{8} = \frac{\sin 48^\circ}{7.2} \rightarrow \sin A \approx 0.8257$

$m\angle A \approx 55.7^\circ \rightarrow m\angle B \approx 76.3^\circ$

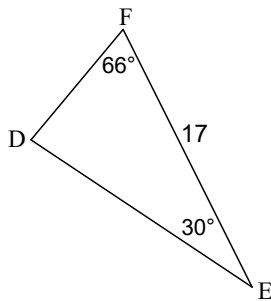
4. $\frac{j}{\sin 54^\circ} = \frac{7}{\sin 39^\circ} \rightarrow j \approx 9.0$



$m\angle G = 87^\circ \rightarrow \frac{g}{\sin 87^\circ} = \frac{7}{\sin 39^\circ}$

$g \approx 11.1$

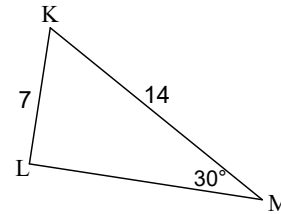
2. $m\angle D = 84^\circ$



$\frac{e}{\sin 30^\circ} = \frac{17}{\sin 84^\circ} \rightarrow e \approx 8.5$

$\frac{f}{\sin 66^\circ} = \frac{17}{\sin 84^\circ} \rightarrow f \approx 15.6$

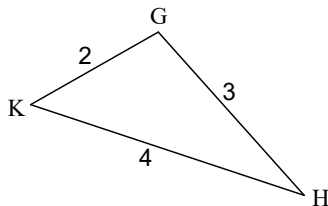
5. $\frac{\sin L}{14} = \frac{\sin 30^\circ}{7} \rightarrow \sin L = 1.0000$



$m\angle L = 90^\circ \rightarrow m\angle K = 60^\circ$

$\frac{k}{\sin 60^\circ} = \frac{7}{\sin 30^\circ} \rightarrow k \approx 12.1$

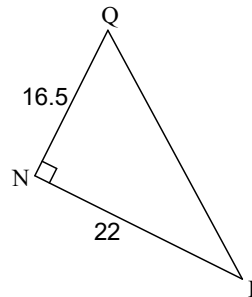
3. $\cos H = \frac{3^2 + 4^2 - 2^2}{2 \cdot 3 \cdot 4} \rightarrow m\angle H \approx 29.0^\circ$



$\frac{\sin K}{3} = \frac{\sin 29^\circ}{2} \rightarrow m\angle K \approx 46.6^\circ$

$m\angle G \approx 104.5^\circ$

6. $n^2 = 16.5^2 + 22^2 - 2 \cdot 16.5 \cdot 22 \cdot \cos 90^\circ$



$n^2 = 756.25 \rightarrow n = 27.5$

$\tan P = \frac{16.5}{22} \rightarrow m\angle P \approx 36.9^\circ$

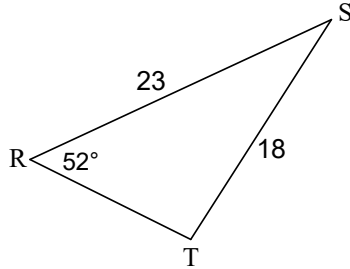
$m\angle Q \approx 53.1^\circ$

ANSWERS

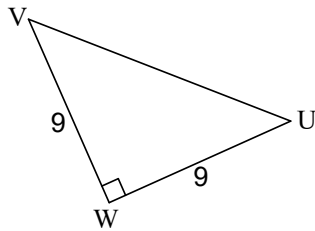
per ___ date _____

Solve the triangles. Round answers to the nearest tenth.

$$7. \quad \frac{\sin T}{23} = \frac{\sin 52^\circ}{18} \rightarrow \sin T \approx 1.007$$

**IMPOSSIBLE!**

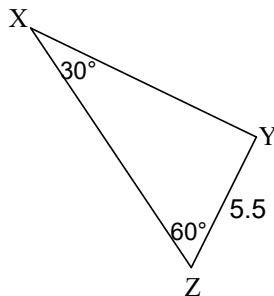
$$8. \quad w^2 = 9^2 + 9^2 - 2 \cdot 9 \cdot 9 \cdot \cos 90^\circ = 162$$



$$w = 9\sqrt{2} \rightarrow \frac{\sin V}{9} = \frac{\sin 90^\circ}{9\sqrt{2}}$$

$$\sin V = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2} \rightarrow m\angle V = 45^\circ$$

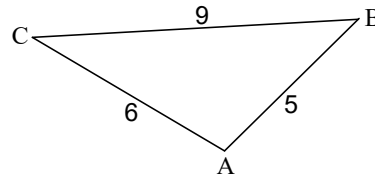
$$9. \quad m\angle Y = 90^\circ \rightarrow \frac{y}{\sin 90^\circ} = \frac{5.5}{\sin 30^\circ}$$



$$y = 11 \rightarrow \frac{z}{\sin 60^\circ} = \frac{5.5}{\sin 30^\circ}$$

$$z \approx 9.5$$

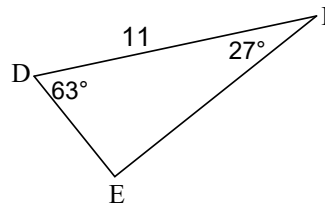
$$10. \quad \cos A = \frac{6^2 + 5^2 - 9^2}{2 \cdot 6 \cdot 5} = \frac{-20}{60} = -\frac{1}{3}$$



$$m\angle A \approx 109.5^\circ \rightarrow \frac{\sin B}{6} = \frac{\sin 109.5^\circ}{9}$$

$$m\angle B \approx 38.9^\circ \rightarrow m\angle C \approx 31.6^\circ$$

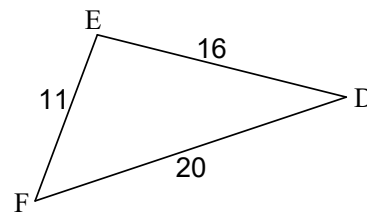
$$11. \quad m\angle E = 90^\circ$$



$$\frac{d}{\sin 63^\circ} = \frac{f}{\sin 27^\circ} = \frac{11}{\sin 90^\circ}$$

$$d \approx 9.8 \rightarrow f \approx 5.0$$

$$12. \quad \cos E = \frac{11^2 + 16^2 - 20^2}{2 \cdot 11 \cdot 16}$$



$$\frac{-23}{352} \approx -0.0653 \rightarrow m\angle E \approx 93.7^\circ$$

$$\frac{\sin D}{11} = \frac{\sin 93.7^\circ}{20} \rightarrow m\angle D \approx 33.3^\circ$$

$$m\angle F \approx 53.0^\circ$$