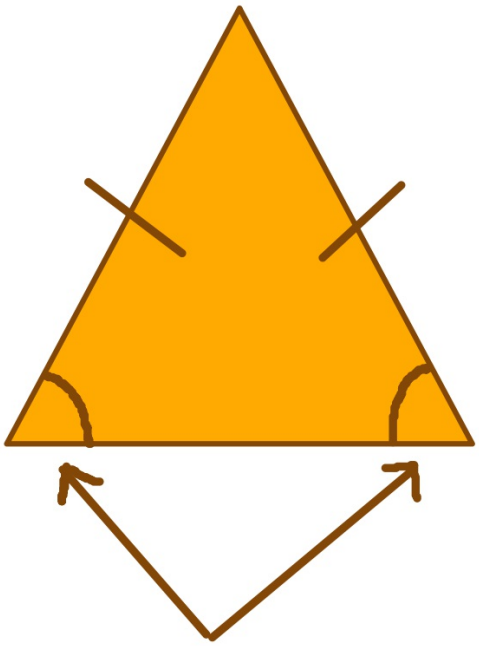
p.285 4.6 Isosceles Triangles

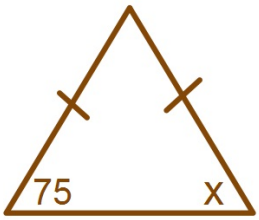
Isosceles Triangles have two ≅ sides (legs) and two ≅ angles. We call these base angles.



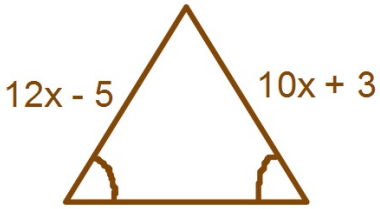
base angles

Examples: Solve for x.

1.

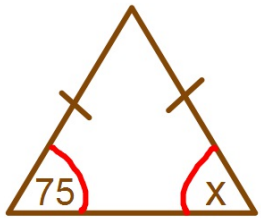


2.



Examples: Solve for x.

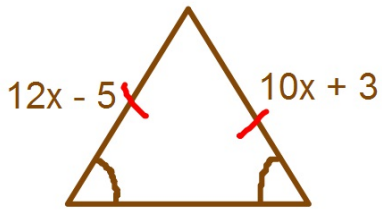
1.



you must mark angles!

$x = 75$

2.



you must mark sides!

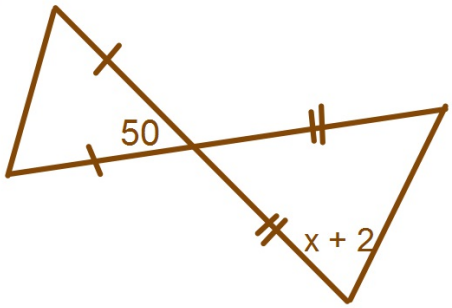
$12x - 5 = 10x + 3$

solve...

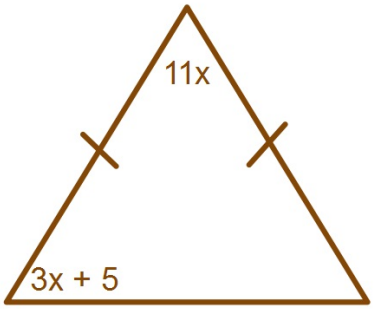
$$\begin{array}{r} 12x - 5 = 10x + 3 \\ -10x \quad -10x \\ \hline 2x - 5 = 3 \\ +5 \quad +5 \\ \hline \frac{2x}{2} = \frac{8}{2} \end{array}$$

$x = 4$

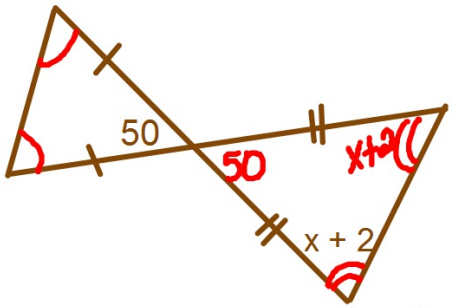
3.



4.



3.



you must mark angles!
*don't forget vertical ∠s ≅

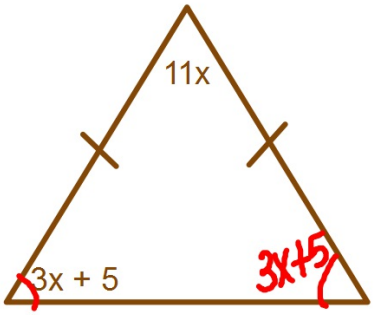
$x+2+x+2+50=180$

solve....

$2x+54=180$
$-54\ \ -54$
$\frac{2x}{2}=\frac{126}{2}$

$x=63$

4.



you must mark angles!

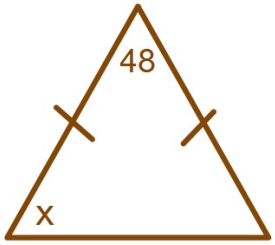
$11x+3x+5+3x+5=180$

Solve...

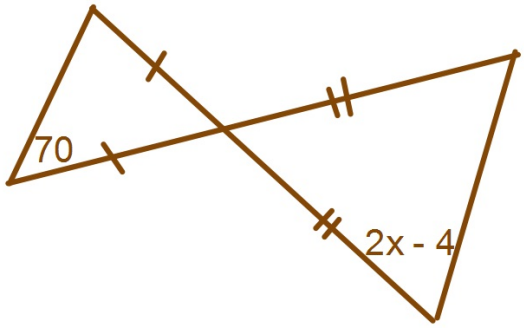
$17x+10=180$
$-10\ \ -10$
$\frac{17x}{17}=\frac{170}{17}$

$x=10$

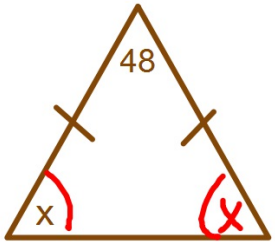
5.



6.



5.



you must mark angles!

$x+x+48=180$

solve...

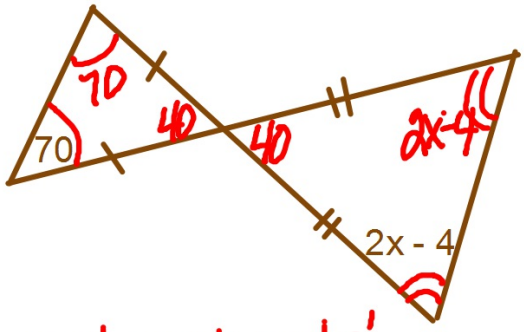
$2x+48=180$

$-48 \quad -48$

$\frac{2x}{2}=\frac{132}{2}$

$x=66$

6.



you must mark angles!
*don't forget vertical $\angle$s $\cong$

$40+2x-4+2x-4=180$

$4x+32=180$

$-32 \quad -32$

$\frac{4x}{4}=\frac{148}{4}$

$x=37$

Turn-in:
p.290 (15-20)

Homework:
Worksheet 4.6