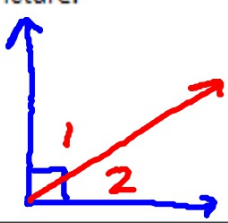
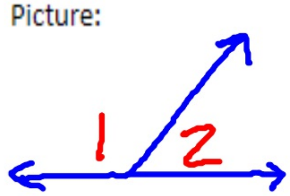
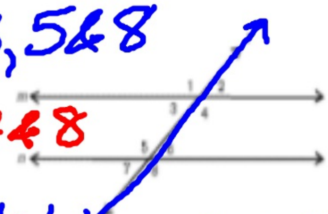
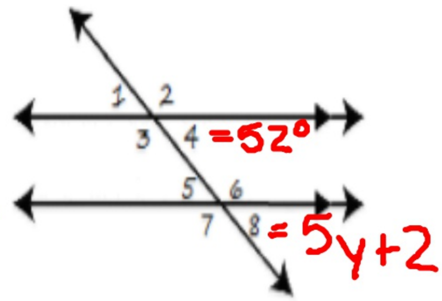
Geometry Review

Angles

Complementary	Supplementary	Transversals
Angles add up to: 90° Picture: 	Angles add up to: 180° Picture: 	Vertical pairs: 1&4, 2&3, 5&8  Linear pairs: 1&2, 3&4, 7&8 Supplementary angles: *Don't have to be on same line Congruent angles: 3&6, 4&5, 7&2

. If $m\angle 4 = 52°$ and $m\angle 7 = (4x)°$, find x.

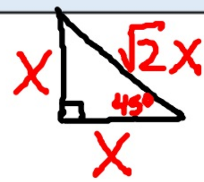
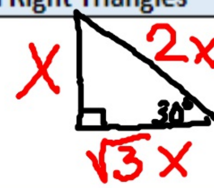
$$52 + 4x = 180°$$
$$-52 \qquad -52$$
$$4x = 128$$
$$x = \frac{128}{4}$$
$$x = 32°$$



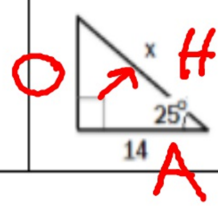
. If $m\angle 4 = 52°$ and $m\angle 8 = (5y+2)°$, find y.

$$52 = 5y + 2$$
$$-2 \qquad -2$$
$$\frac{50}{5} = \frac{5y}{5}$$
$$y = 10°$$

Triangles

General Properties	Special Right Triangles	
Angles: add up to 180° Sides: $a^2+b^2=c^2$ Hypotenuse: longest side		

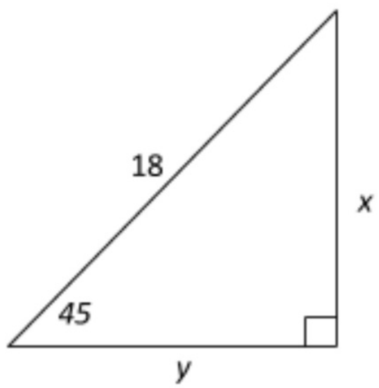
Trigonometry

Trig Functions:	Examples:	Other Notes:
$S\frac{O}{H}$ $C\frac{A}{H}$ $T\frac{O}{A}$	If tan(y)=7.115, then y= 82°  $\frac{\cos 25}{1}=\frac{14}{x}$	*When solving for an angle, you must use inverse trig functions

$$\frac{x\cdot\cos 25}{\cos 25}=\frac{14}{\cos 25}$$

$$x = 15.45$$

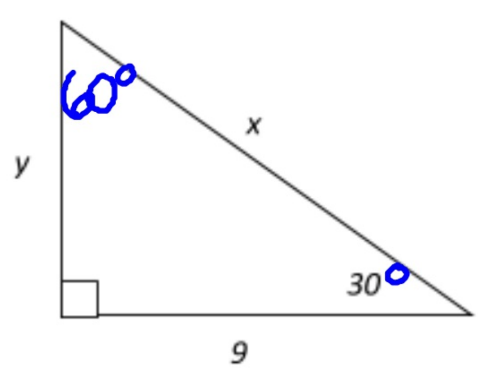
1.



X = ___________

Y = ___________

2.



X = $6\sqrt{3}$

Y = $3\sqrt{3}$

30-60-90

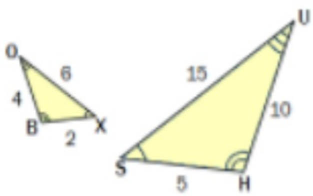
$x - \sqrt{3}x - 2x$

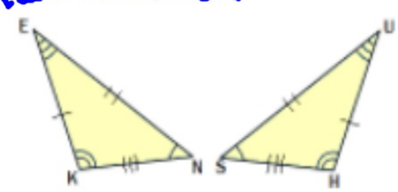
$\sqrt{3}x = 9$

$\frac{\sqrt{3}x}{\sqrt{3}} = \frac{9}{\sqrt{3}}$

$x = \frac{9}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{9\sqrt{3}}{3} = 3\sqrt{3}$

Comparing Figures

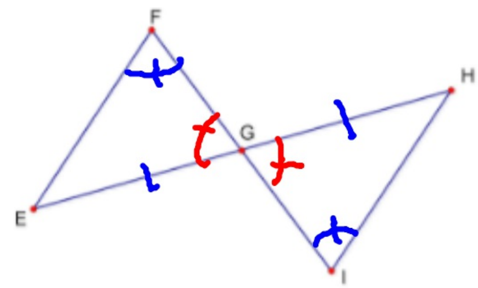
Similarity		
Example:	Postulates:	Other Notes:
△BOX ~ △HUS; Scale factor = $\frac{2}{5}$ 	SSS SAS AA	• Angles are congruent • Sides are proportional

Congruence		
Example:	Postulates:	Other Notes:
△NKE ≅ △SHU 	ASA SSS SAS AAS HL	• CPCTC - congruent parts of congruent triangles congruent

16. Complete the following proof.

Given: $\angle F \cong \angle I$, *G is the midpoint of* $\overline{EH}$

Prove: $\triangle FGE \cong \triangle IGH$



Given

G is midpoint $\overline{EH}$

↓

Def. of Midpoint	**Given**	Def. Vertical ∠'s
$\overline{EG} \cong \overline{HG}$	$\angle F \cong \angle I$	$\angle G \cong \angle G$

↓

AAS

$\triangle FGE \cong \triangle IGH$