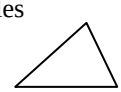
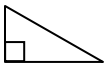
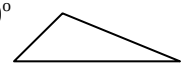
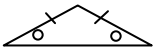
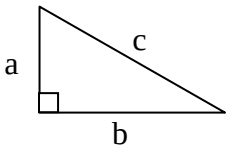
Geometry Review Name:

Type of Triangles and Some Triangles Theorems

Triangles / Angles	Scalene Triangle	Isosceles Triangle	Equilateral Triangle
Acute - all angles are less than 90^o	-all 3 sides and angles are different and are less than 90^o 	- 2 sides and 2 corresponding angles are same 	- all sides and angles are same. 
Right - one angle is 90^o	- all 3 sides and angles are different and 1 angle is 90^o 	- 2 sides and 2 corresponding angles are same, the 3rd angle is 90^o 	
Obtuse - one angle is greater than 90^o	-all 3 sides and angles are different and one angle is greater than 90^o 	- 2 sides and 2 corresponding angles are same, the 3rd angle is greater than 90^o 	

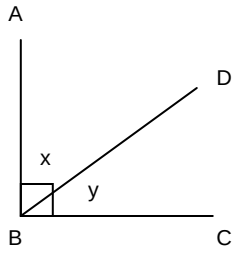
Pythagorean Theorem

The square of the length of the longest side is equal to the sum of the squares of the other 2 sides in a right triangle. $a^2 + b^2 = c^2$



Basic Angle Theorems/Authorities

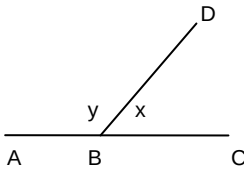
Complementary Angles (CA)



If AB ⊥ BC, then
∠ABD + ∠DBC = _____°

or, x + y = _____°

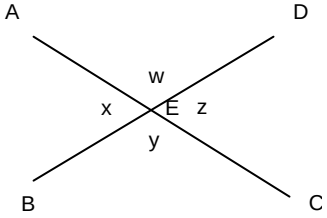
Supplementary Angles (SA)



If ∠ABC is a _____ line, then
∠_____ + ∠_____ = _____°

or x + y = _____°

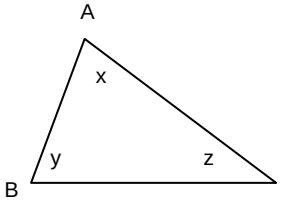
Opposite Angle Theorem (OAT)



If AC and BD are line segments intersecting at E, then, _____ = _____

and, _____ = _____

Sum of Angles in a Triangle Theorem (SATT)



In any triangle, the sum of the angles is _____°
That is:

_____ + _____ + _____

= _____°

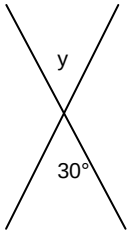
Geometry Review

Name:

Exercise:

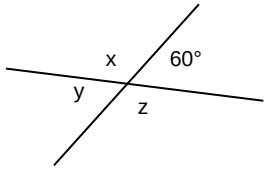
Find the unknown angles indicated and show work (including authorities in the brackets)

a)



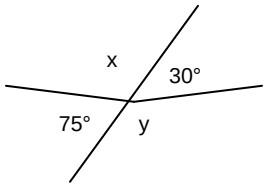
y = _____ ( )

b)



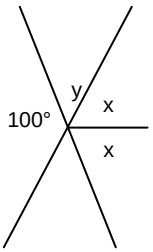
x = _____ ( )
y = _____ ( )
z = _____ ( )

c)



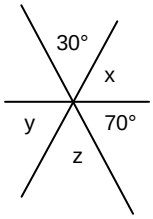
x = _____ ( )
y = _____ ( )

d)



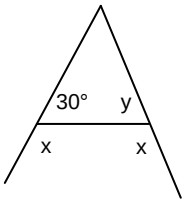
x = _____ ( )
y = _____ ( )

e)



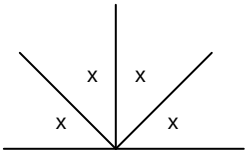
x = _____ ( )
y = _____ ( )
z = _____ ( )

f)



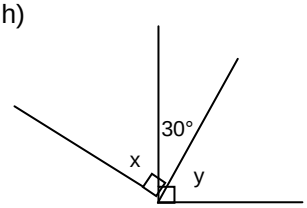
x = _____ ( )
y = _____ ( )

g)



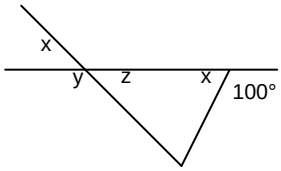
x = _____ ( )

h)



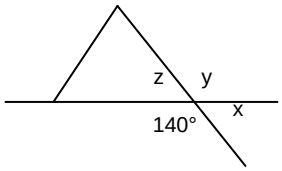
x = _____ ( )
y = _____ ( )

i)



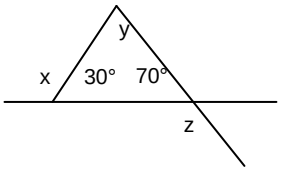
x = _____ ( )
y = _____ ( )
z = _____ ( )

j)



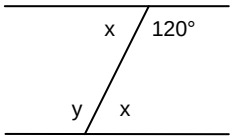
x = _____ ( )
y = _____ ( )
z = _____ ( )

k)



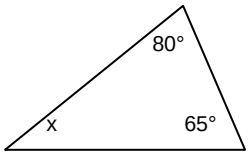
x = _____ ( )
y = _____ ( )
z = _____ ( )

l)



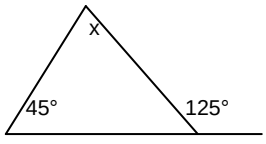
x = _____ ( )
y = _____ ( )

m)



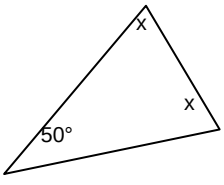
x = _____ ( )

n)



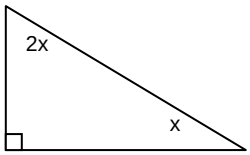
x = _____ ( )

o)



x = _____ ( )

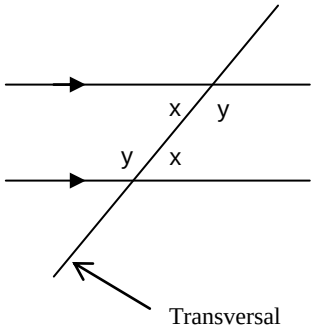
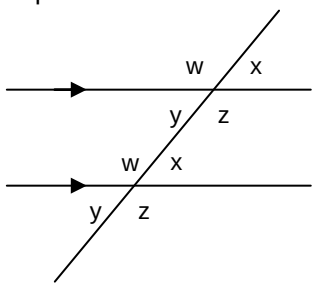
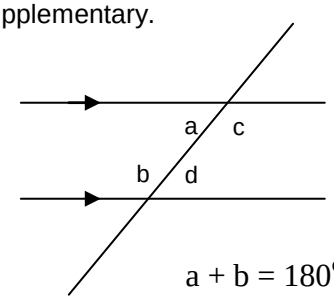
p)



x = _____ ( )

Geometry Review Name:

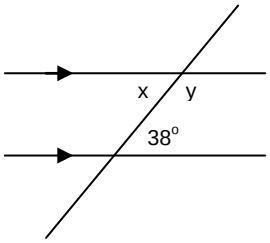
Parallel Line Theorem (PLT)

Alternate Angle Theorem (Z)	**Corresponding Angle Theorem (F)**	**Interior Angle Theorem (C)**
If a transversal intersects two parallel lines, then the alternate angles are equal.	If a transversal intersects two parallel lines, then the corresponding angles are equal.	If a transversal intersects two parallel lines, then the interior angles are supplementary.
		 $a + b = 180^o$ $c + d = 180^o$

Exercise

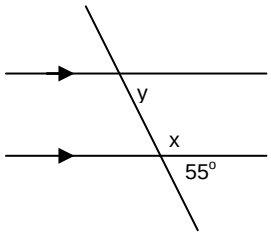
State the values of the unknowns (including authorities in the brackets)

a)



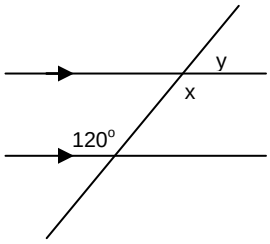
x = _____ ( )
y = _____ ( )

b)



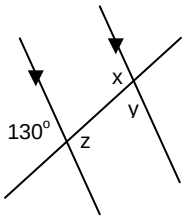
x = _____ ( )
y = _____ ( )

c)



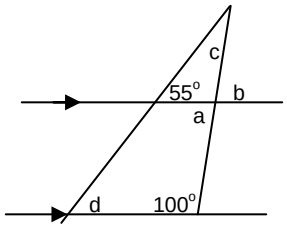
x = _____ ( )
y = _____ ( )

d)



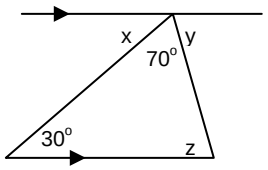
x = _____ ( )
y = _____ ( )
z = _____ ( )

e)



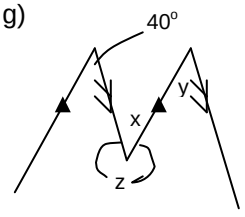
a = _____ ( )
b = _____ ( )
c = _____ ( )
d = _____ ( )

f)



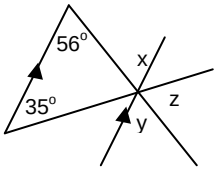
x = _____ ( )
y = _____ ( )
z = _____ ( )

g)



x = _____ ( )
y = _____ ( )
z = _____ ( )

h)

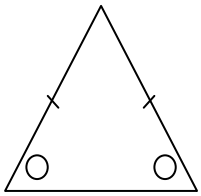


x = _____ ( )
y = _____ ( )
z = _____ ( )

Geometry Review Name:

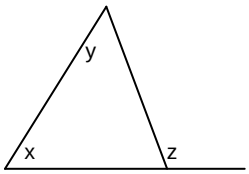
More Triangle Theorems

Isosceles Triangle Theorem (ITT)



In any isosceles triangle, the angles opposite the equal sides are equal.

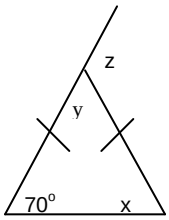
Exterior Angle Theorem (EAT)



In any triangle, the exterior angle equals to the sum of the interior opposite angles.
x + y = z

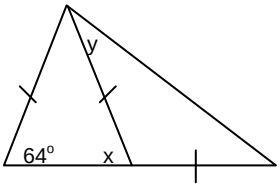
Exercise 3:
State the values of the unknowns (including authorities in the brackets)

a)



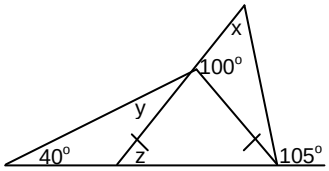
x = _____ ( )
y = _____ ( )
z = _____ ( )

b)



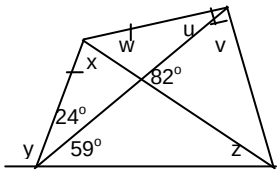
x = _____ ( )
y = _____ ( )

c)



x = _____ ( )
y = _____ ( )
z = _____ ( )

d)



u = _____ ( )
v = _____ ( )
w= _____ ( )
x = _____ ( )
y = _____ ( )
z = _____ ( )

Answers

Exercise 1:
a) 30^o b) 120^o, 60^o, 120^o c) 105^o,105^o d) 50^o, 80^o e) 80^o, 80^o, 30^o f) 100^o, 80^o g) 45^o h) 60^o, 60^o
i) 80^o, 100^o, 80^o j) 40^o, 140^o, 40^o k) 150^o, 80^o, 100^o l) 60^o, 120^o m) 35^o n) 80^o o) 65^o p) 30^o

Exercise 2:
a) 38^o, 142^o b) 125^o, 55^o c) 120^o,60^o d) 130^o, 50^o, 130^o e) 80^o, 80^o, 25^o, 55^o f) 30^o, 80^o, 80^o
g) 40^o, 40^o, 320^o h) 56^o, 56^o, 89^o

Exercise 3:
a) 70^o, 40^o, 140^o b) 64^o, 32^o c) 55^o, 10^o, 50^o d) 24^o, 66^o, 58^o, 74^o, 97^o, 23^o