



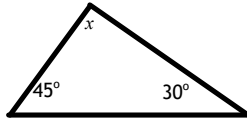
1.0 - Review of Angle Properties

Get Ready...

A. Sum of Angles in a Triangle:

All 3 angles in a triangle add to 180.

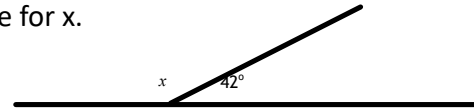
Ex.1 Solve for x.



$$\begin{aligned} 180 &= x + 45 + 30 \\ &= x + 75 \\ x &= 105^\circ \end{aligned}$$

B. Supplementary angles always add to 180.

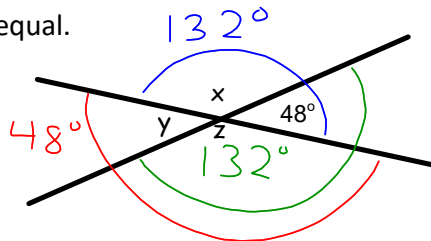
Ex.2 Solve for x.



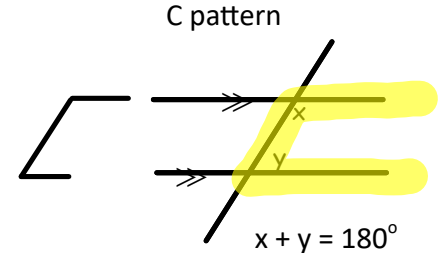
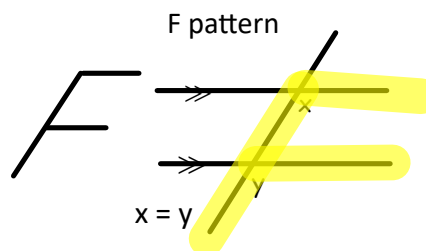
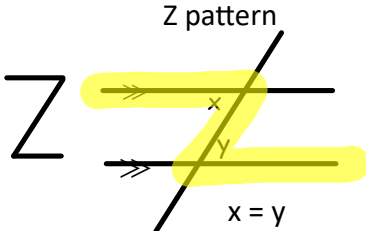
$$\begin{aligned} 180 &= x + 42 \\ x &= 138 \end{aligned}$$

C. Opposite angles are always equal.

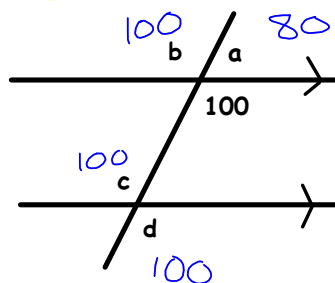
Ex.3 Solve for x, y and z.



D. Parallel Lines



Ex. 4 Find the value of the unknowns.
Can you find another method to find each angle?

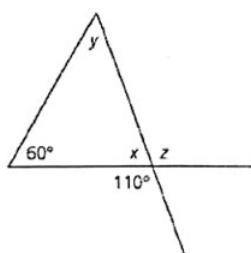


1.

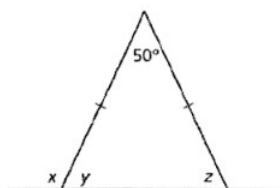
Determine the values of x , y , and z in each diagram.



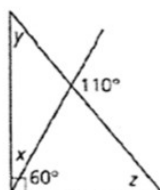
(a)



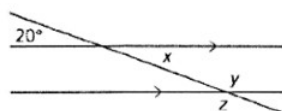
(b)



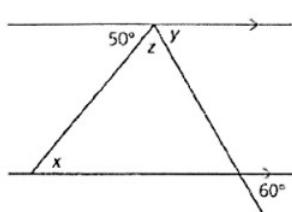
(h)



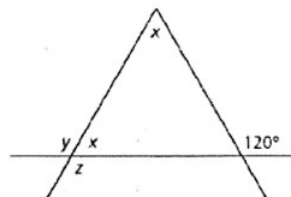
(c)



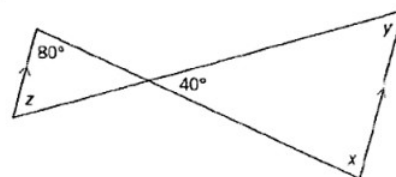
(d)



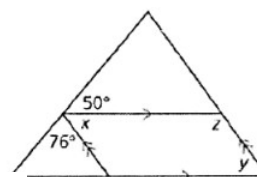
(g)



(e)

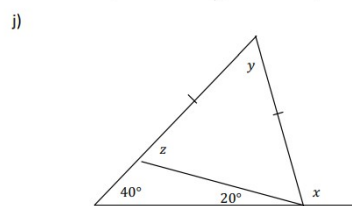
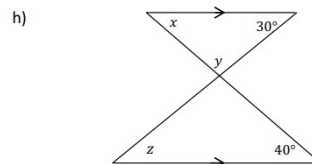
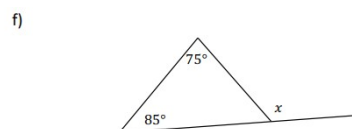
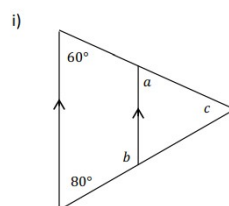
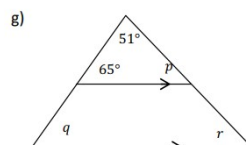
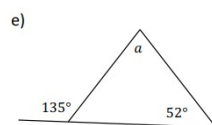
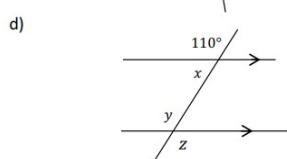
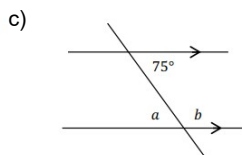
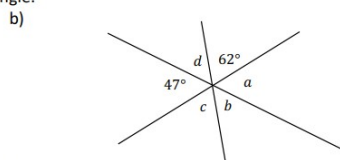
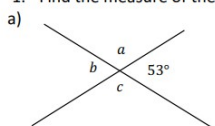


(f)

Answers:

- a) $x = 70, y = 50, z = 110$
- b) $x = 115, y = 65, z = 65$
- c) $x = 20, y = 160, z = 160$
- d) $x = 50, y = 60, z = 70$
- e) $x = 80, y = 60, z = 60$
- f) $x = 54, y = 54, z = 126$
- g) $x = 60, y = 120, z = 120$
- h) $x = 30, y = 40, z = 50$

1. Find the measure of the unknown angle.

**Answers:**

1. a) $a-127^\circ$ (sup) $b-53^\circ$ (opp) $c-127^\circ$ (opp)
 b) $a-47^\circ$ (opp) $b-71^\circ$ (opp) $c-62^\circ$ (opp) $d-71^\circ$ (sup)
 c) $a-75^\circ$ (Z) $b-105^\circ$ (C)
 d) $x-70^\circ$ (sup) $y-110^\circ$ (F) $z-110^\circ$ (opp)
 e) $a-83^\circ$ (SATT)
 f) $x-160^\circ$ (sup)
 g) $p-64^\circ$ (SATT), $q-65^\circ$ (F), $r-64^\circ$ (F)
 h) $x-40^\circ$ (Z) $y-110^\circ$ (SATT) $z-30^\circ$ (Z)
 i) $a-60^\circ$ (F) $b-100^\circ$ (C) $c-40^\circ$ (SATT)
 j) $x-100^\circ$ (sup) $y-60^\circ$ (SATT) $z-60^\circ$ (sup)