



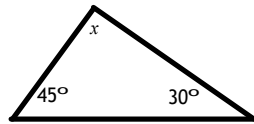
1.0 - Review of Angle Properties

Get Ready...

A. Sum of Angles in a Triangle:

All 3 angles in a triangle add to 180.

Ex.1 Solve for x.



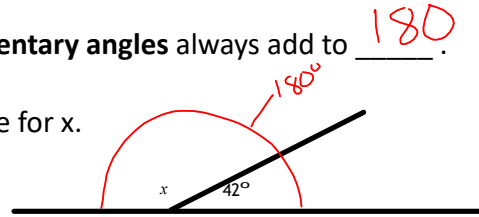
$$180 = x + 45 + 30$$

$$x = 180 - 45 - 30$$

$$= 105^\circ$$

B. Supplementary angles always add to 180.

Ex.2 Solve for x.



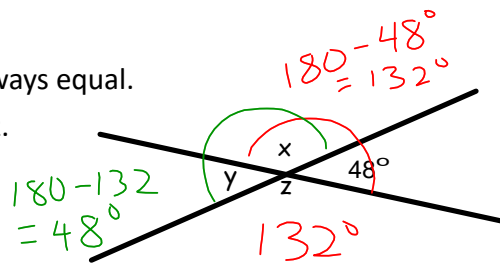
$$180 = x + 42$$

$$x = 180 - 42$$

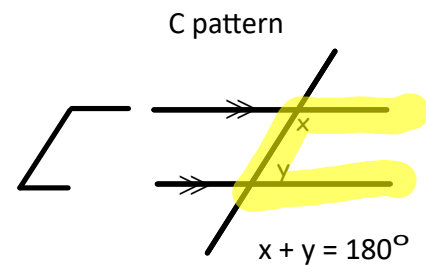
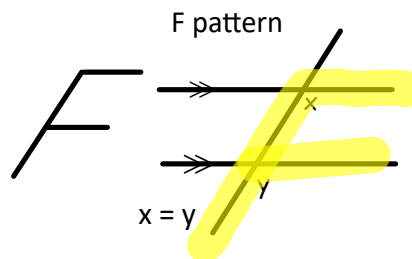
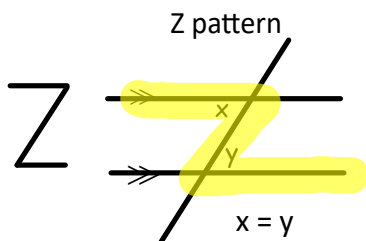
$$= 138^\circ$$

C. Opposite angles are always equal.

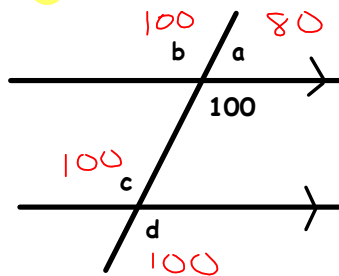
Ex.3 Solve for x, y and z.



D. Parallel Lines



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

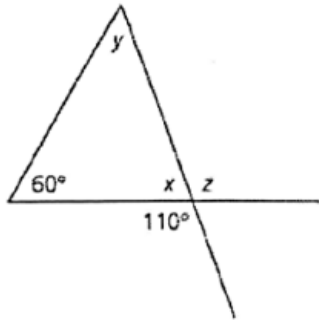




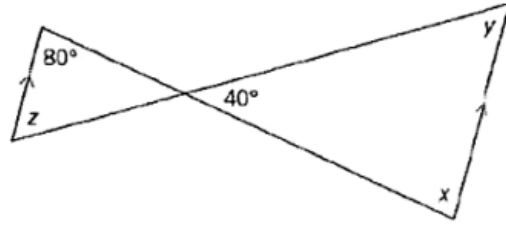
1.

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

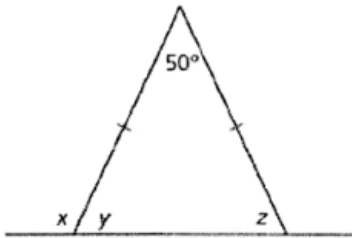
(a)



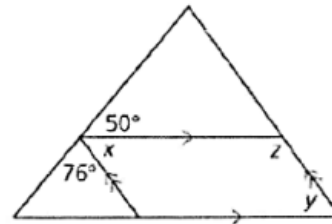
(e)



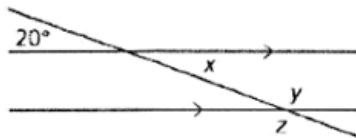
(b)



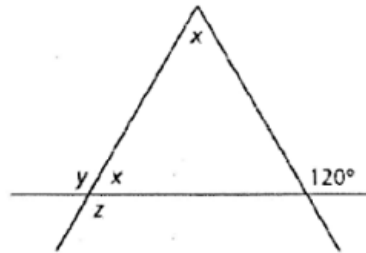
(f)



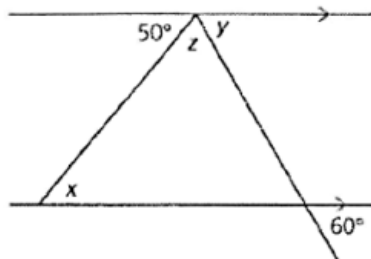
(c)



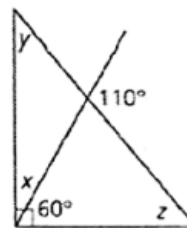
(g)



(d)



(h)



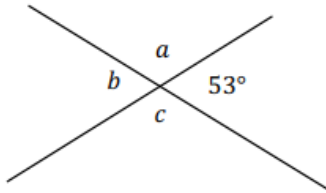
Answers:

- 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) $x = 30, y = 40, z = 50$

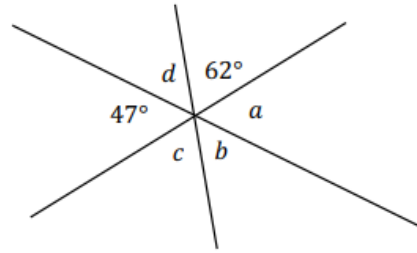


1. Find the measure of the unknown angle.

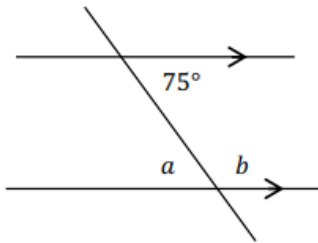
a)



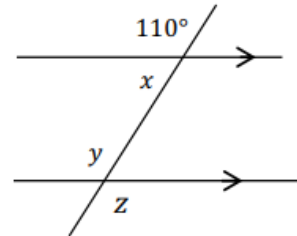
b)



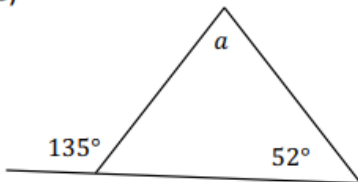
b)



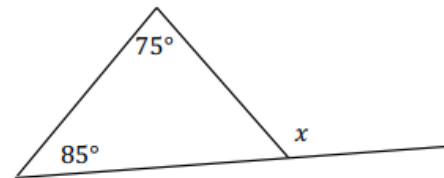
d)



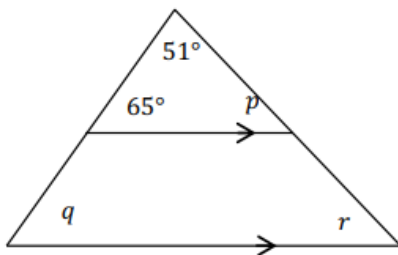
e)



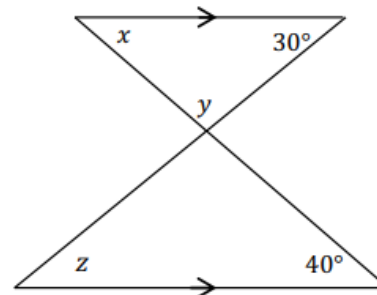
f)



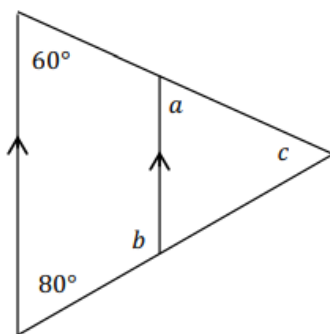
g)



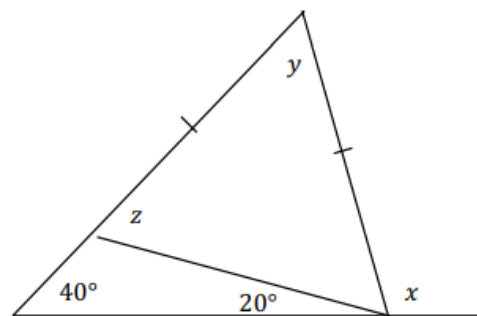
h)



i)



j)



Answers:

1. a) $a-127^\circ$ (sup) $b-53^\circ$ (opp) $c-127^\circ$ (opp)

g) $p-64^\circ$ (SATT), $q-65^\circ$ (F), $r-64^\circ$ (F)

b) $a-47^\circ$ (opp) $b-71^\circ$ (opp) $c-62^\circ$ (opp) $d-71^\circ$ (sup)

h) $x-40^\circ$ (Z) $y-110^\circ$ (SATT) $z-30^\circ$ (Z)

c) $a-75^\circ$ (Z) $b-105^\circ$ (C)

i) $a-60^\circ$ (F) $b-100^\circ$ (C) $c-40^\circ$ (SATT)

d) $x-70^\circ$ (sup) $y-110^\circ$ (F) $z-110^\circ$ (opp)

j) $x-100^\circ$ (sup) $y-60^\circ$ (SATT) $z-60^\circ$ (sup)

e) $a-83^\circ$ (SATT)

f) $x-160^\circ$ (sup)

1. Solve.

$$(a) \frac{2}{5} = \frac{x}{20}$$

$$(b) \frac{4}{7} = \frac{36}{x}$$

$$(c) \frac{9}{12} = \frac{24}{x}$$

$$(d) \frac{25}{x} = \frac{5}{2}$$

$$(e) \frac{9}{x} = \frac{15}{20}$$

$$(f) \frac{x}{15} = \frac{64}{24}$$

$$(g) \frac{20}{65} = \frac{16}{x}$$

$$(h) \frac{x}{7} = \frac{6}{21}$$

Answers:

1. a) $x = 8$

b) $x = 63$

c) $x = 32$

d) $x = 10$

e) $x = 12$

f) $x = 40$

g) $x = 52$

h) $x = 2$