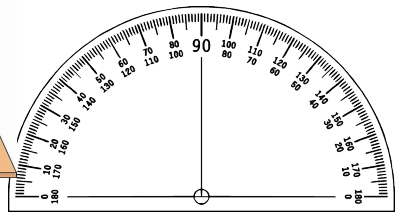
Warm Up Gr. 6
Lesson 3 part 2



a) If two inside angles of a triangle are 73°, 21° what is the measure of the third angle? (Show work)

94°

180^0-given

180^0- 94°

86°

The third angle is 86°.

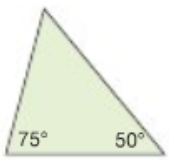
Practice

1. Draw 3 different triangles on dot paper. Measure and record each angle. Find the sum of the measures of the angles for each triangle.

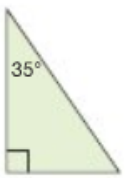
Many solutions

2. Determine the measure of the third angle without measuring.

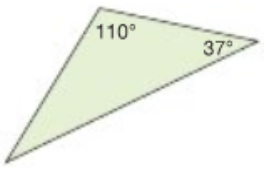
a)



b)



c)



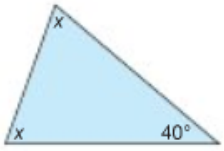
a) Missing angle = 180° - 50° - 75°
= 180° - 125°
= 55°

b) Missing angle = 180° - 35° - 90°
= 180° - 125°
= 55°

c) Missing angle = 180° - 37° - 110°
= 180° - 147°
= 33°

3. The two unknown angles in each triangle below are equal.
Determine the measure of each unknown angle without measuring.
Explain the strategy you used.

a)



$180^o - 40^o$

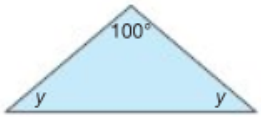
$= 140^o$

Sum of $x + x = 140^o$

$140^o \div 2 = 70^o$

so $x = 70^o$

b)



$180^o - 100^o$

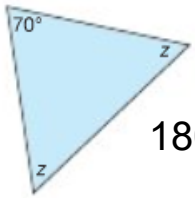
$= 80^o$

Sum of $y + y = 80^o$

$80^o \div 2 = 40^o$

so $y = 40^o$

c)



$180^o - 70^o$

$= 110^o$

Sum of $z + z = 110^o$

$110^o \div 2 = 55^o$

so $z = 55^o$

4. Two angles of a triangle are given.
Find the measure of the third angle.

a) 55°, 105° b) 45°, 90°
c) 30°, 60° d) 25°, 125°

a) Missing angle $= 180^o - \underbrace{55^o - 105^o}$

$= 180^o - 160^o$

$= 20^o$

b) Missing angle $= 180^o - \underbrace{45^o - 90^o}$

$= 180^o - 135^o$

$= 45^o$

c) Missing angle $= 180^o - \underbrace{30^o - 60^o}$

$= 180^o - 90^o$

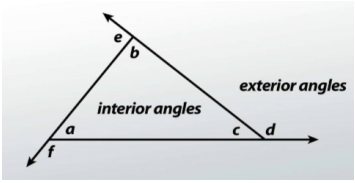
$= 90^o$

d) Missing angle $= 180^o - \underbrace{25^o - 125^o}$

$= 180^o - 150^o$

$= 30^o$

The inside angles of a triangle or any polygon is called the **interior angles**

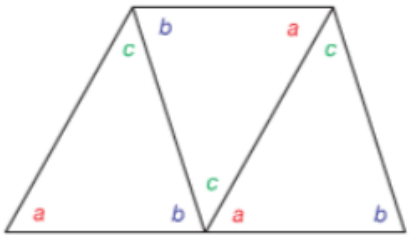


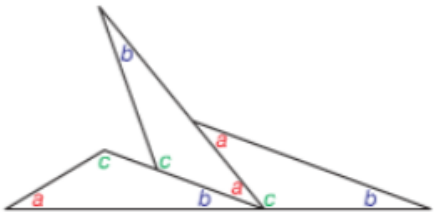
The symbol ∠A refers to angel A

MUST STUDY

The sum of the angles in a triangle is 180° (a straight angle)

$\angle a + \angle b + \angle c = 180^\circ$

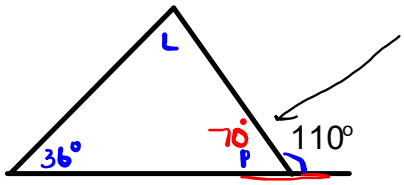




These triangles are not drawn to scale. NO protractors

Find the measure of the missing angles (show work and explain your strategy used)

a)



$P + 110° = 180°$

$P = 70°$ straight angle

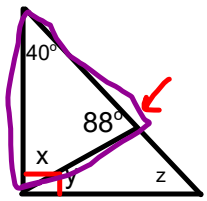
$L = 180° - \text{given}$

$L = 180° - (36° + 70°)$

$L = 180° - 106°$

$L = 74°$

b)



$x = 180° - \text{given}$

$x = 180° - (40° + 88°)$

$x = 180° - 128°$

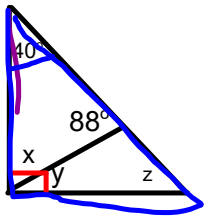
$x = 52°$

$x + y = 90°$

$52° + y = 90°$

$y = 90° - 52°$

$y = 38°$



$z = 180° - \text{given}$

$z = 180° - (40° + 90°)$

$z = 180° - 130°$

$z = 50°$

Page 148-149

#6,8ab,9a Must show work

5. Vegreville, Alberta, is home to the world's largest known Ukrainian egg. It has 1108 triangular pieces with three angles of equal measure.
Find the measure of each angle.
Explain your strategy.

6. Is it possible for a triangle to have:
   a) more than 1 obtuse angle?
   b) 2 right angles?
   c) 3 acute angles?

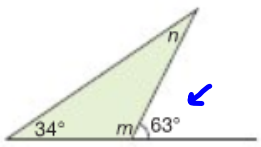
   Explain your thinking.
   Use pictures and words.

7. Find the measure of the third angle in each triangle described below. Then, draw the triangle.
Explain how you found each measure.
   a) A triangle with two angles measuring 65° and 55°
   b) A triangle with two equal angles; each measures 40°
   c) A right triangle with a 70° angle

TIP

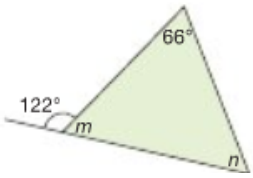
8. Find the measures of the angles labelled m and n.
Explain the strategy you used.

a)



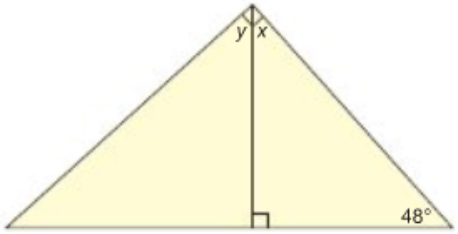
b)

c)

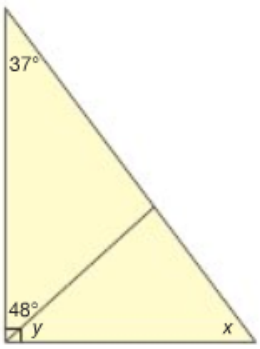


9. Find the measures of the angles labelled x and y.
Show your work. Explain the strategy you used.

a)



b)



Attachments

Worksheet Maeasuring Angles with Protractors.pdf