Math on the Fly!
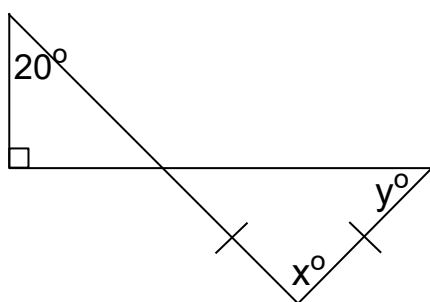
NAME: _____ DATE: _____

Finding Angles Inside and Outside of Polygons
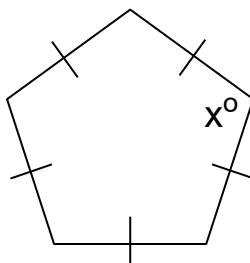
Find the unknown angles in each diagram below.
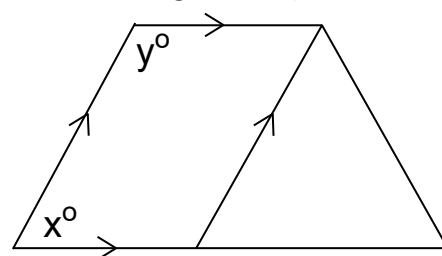
1.

$20°$

$x°$

$y°$
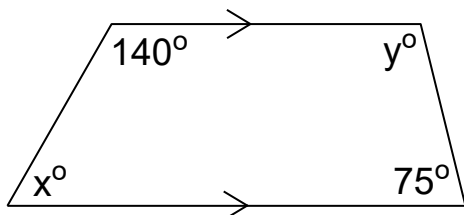
2.

The pentagon is regular.

$x°$

3.

The triangle is equilateral.

$y°$

$x°$

4.

$140°$

$y°$

$x°$

$75°$

5.

$125°$

$y°$

$x°$
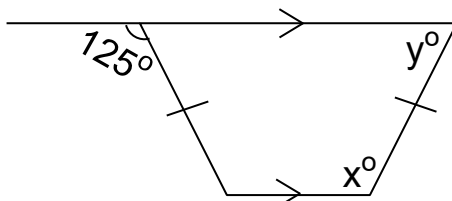
6.

The figure is a square.
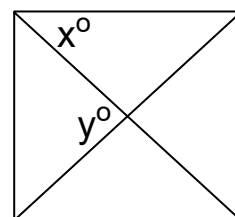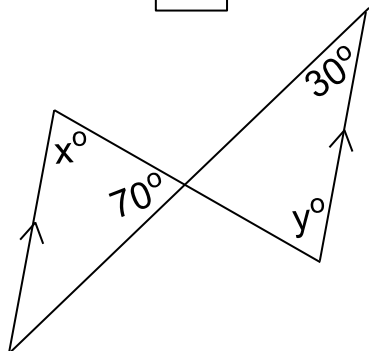
$x°$

$y°$

7.

$30°$

$x°$

$70°$

$y°$

8.

$\overline{AB} = 14$ cm, $\overline{BC} = 7$ cm, $\overline{AC} = 7\sqrt{3}$ cm

A

$y°$

$x°$

B   C

9.

$130°$

$x°$

$120°$

$80°$

SOLUTIONS

1. $x = 40^o, \ y = 70^o$

2. $x = 108^o$

3. $x = 60^o, \ y = 120^o$

4. $x = 40^o, \ y = 105^o$
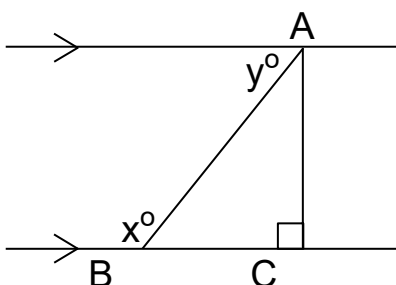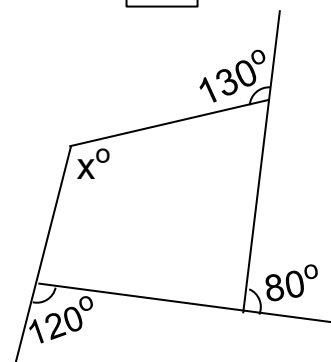
5. $x = 125^o, \ y = 55^o$
     (The trapezoid is isosceles)

6. $x = 45^o, \ y = 90^o$

7. $x = 80^o, \ y = 80^o$

8. $x = 120^o, \ y = 60^o$
     (The triangle is a 30°–60°–90° triangle)

9. $x = 150^o$