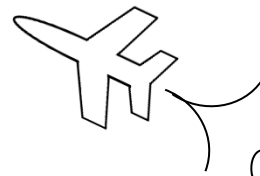




# MAth on the Fly!

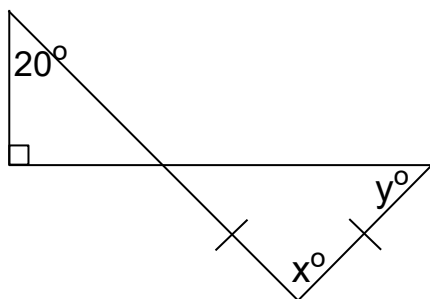


NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

## Finding Angles Inside and Outside of Polygons

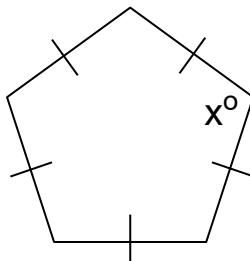
Find the unknown angles in each diagram below.

1.



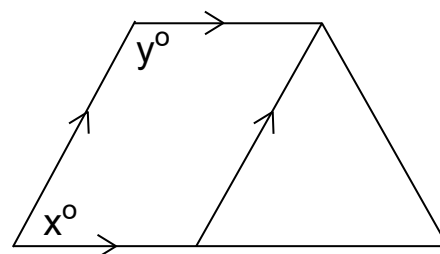
2.

The pentagon is regular.

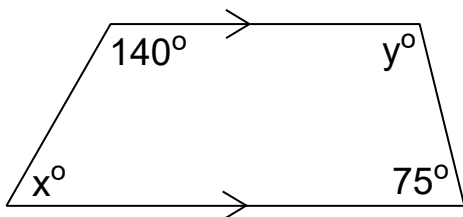


3.

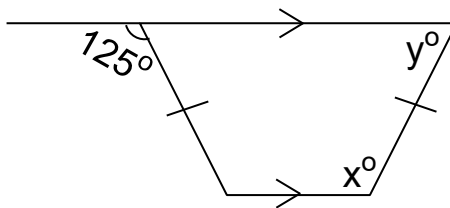
The triangle is equilateral.



4.

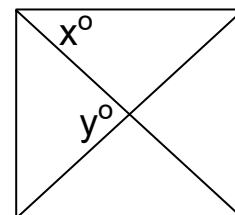


5.

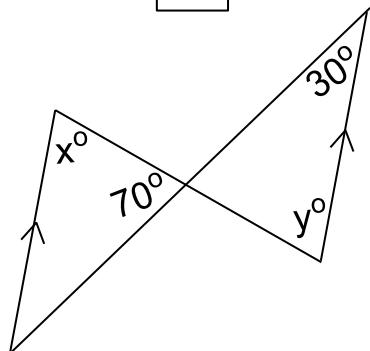


6.

The figure is a square.

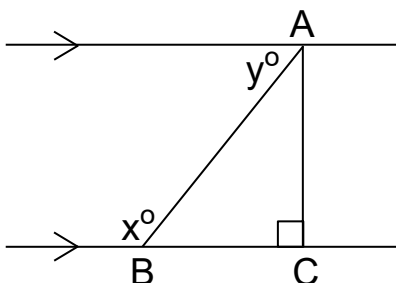


7.

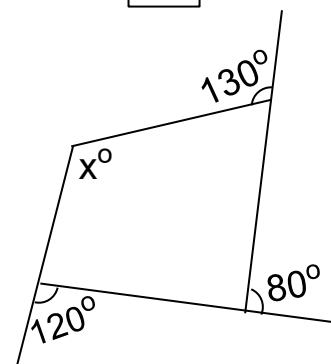


8.

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



9.



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## SOLUTIONS

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

2.  $x = 108^\circ$

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

4.  $x = 40^\circ, y = 105^\circ$

5.  $x = 125^\circ, y = 55^\circ$   
(The trapezoid is isosceles)

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

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

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

9.  $x = 150^\circ$