

Routine Angles and Shapes Practice #2

1.

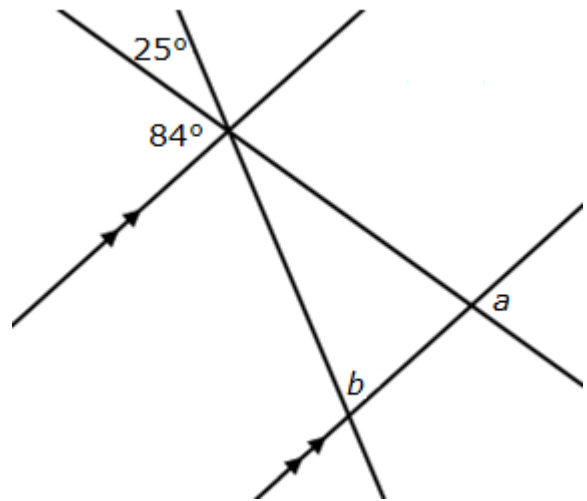
Angle  $a =$  .....

Reason = .....

Angle  $b =$  .....

Reasons = .....

.....



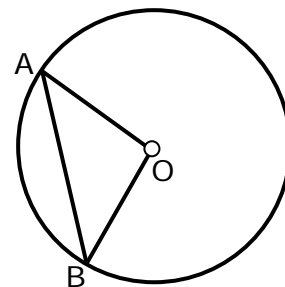
2.

Angle  $\angle AOB = 62^\circ$

Angle  $\angle ABO =$  .....

Reasons = .....

.....

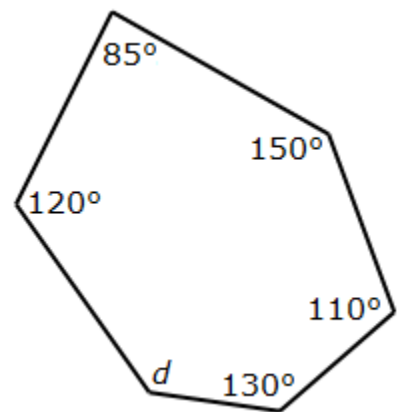


3.

Angle  $d =$  .....

Reasons = .....

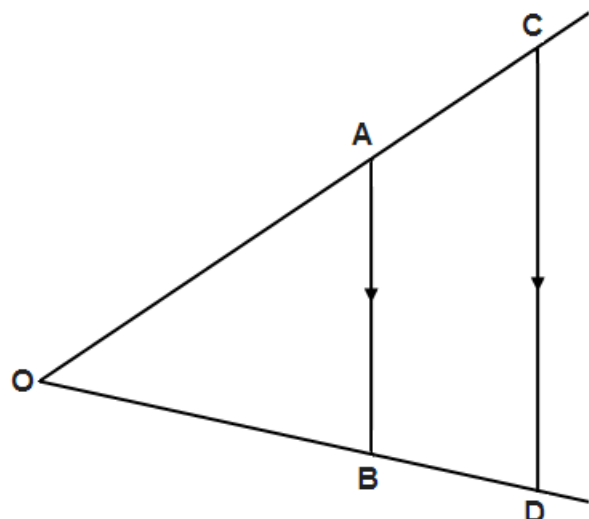
.....



4.

The distance  $\overline{OA}$  is 6 m,  
the distance  $\overline{AB}$  is 5 m  
and the distance  $\overline{OC}$  is 9 m.

The distance  $\overline{CD} =$  .....



Answers: Routine Angles and Shapes Practice #2

1.

Angle  $a = 84^\circ$

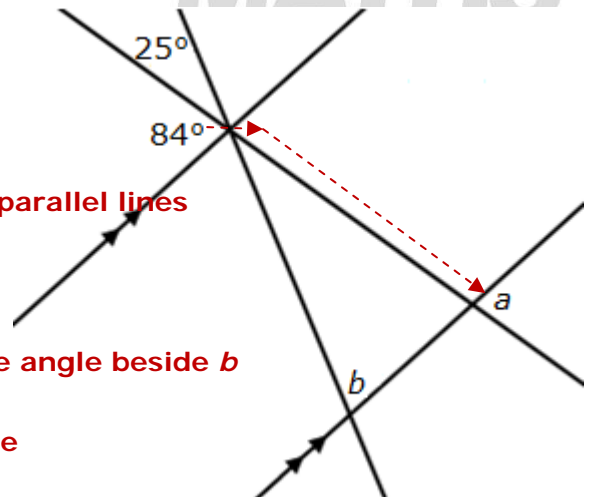
Reason = **Vertically opposite then corresponding on parallel lines**

Angle  $b = 71^\circ$

**$25^\circ + 84^\circ = 109^\circ$  which corresponds to the angle beside  $b$**

**$180^\circ - 109^\circ = 71^\circ$ , angles on a straight line**

(or angles in a triangle =  $180^\circ$ , with vertically opposite giving  $25^\circ$  and  $84^\circ$  for others)



2.

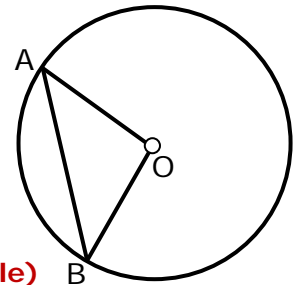
Angle  $\angle AOB = 62^\circ$

Angle  $\angle ABO = 59^\circ$

Reasons =  **$\angle AOB + \angle ABO + \angle BAO = 180$  (sum of angles in triangle)**

**$\angle ABO = \angle BAO$  (Isosceles triangle as all radii are equal)**

**$(180 - 62) \div 2 = 59^\circ$**

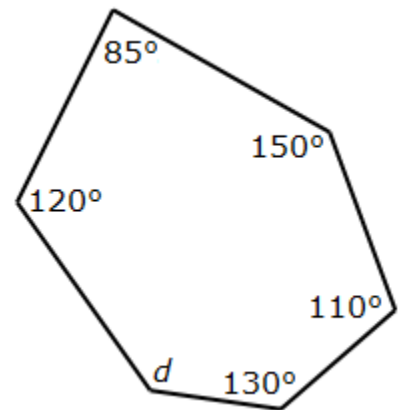


3.

Angle  $d = 125^\circ$

Reasons = **angles in hexagon add up to  $720^\circ$  ( $4 \times 180^\circ$ )**

**$125^\circ = 720 - 130 - 110 - 150 - 85 - 120$**



4.

The distance  $\overline{OA}$  is 6 m, the distance  $\overline{AB}$  is 5 m and the distance  $\overline{OC}$  is 9 m.

The distance  $\overline{CD} = 7.5$

**The ratio  $OA : OC = 6 : 9 = 1 : 1.5$**

**The ratio  $AB : CD$  is the same, so  $CD = 5 \times 1.5$**

