

Al Moattasem International School

Jubail

Level 8 – Revision 4

Line and Angles Revision Work Sheet 1

Chapter 4

Topic Line and Angles

Answer Key

1. Measurement of reflex angle is between 180° and 360°
2. The sum of angle of a triangle is 180°
3. In fig if $x=30^\circ$ then $y=$
$$180^0 - 30^0$$
$$= 150^\circ$$

4. Solution

$$50^\circ + x = 180^\circ \quad (\text{by linear pair})$$

$$x = 180^\circ - 50^\circ$$

$$x = 130^\circ$$

$$y = 130^\circ \quad (\because \text{vertically opposite angles are equal})$$

5. Solution

$$X = 45^\circ$$

$$\therefore Z = 45^\circ \quad \because \text{vertically opposite angles are equal}$$

$$X + y = 180^\circ \quad (\text{By linear pair})$$

$$45^\circ + y = 180^\circ$$

$$y = 180^\circ - 45$$

$$y = 135^\circ$$

$$y = u \quad (\text{vertically opposite angles})$$

$$u = 135^\circ$$

6. Solution

$$\angle PQT + \angle PQR = 180^\circ$$

$$110^\circ + \angle PQR = 180^\circ$$

$$\angle PQR = 180^\circ - 110^\circ$$

$$\angle PQR = 70^\circ$$

Also $\angle SPR = \angle PQR + \angle PRQ$

$$135^\circ = 70^\circ + \angle PRQ$$

$$\angle PRQ = 135^\circ - 70^\circ$$

$$\angle PRQ = 65^\circ$$

7. Solution

The exterior angle of a triangle is equal to the sum of interior opposite angles.

$$\therefore \angle ACD = \angle A + \angle B$$

$$110 = \angle A + 35^\circ$$

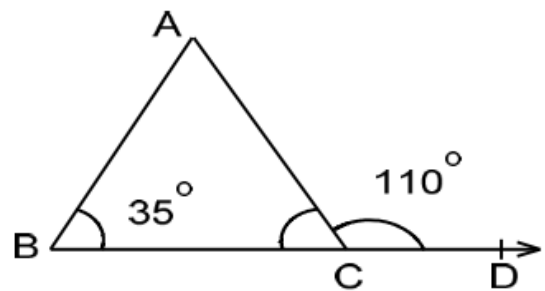
$$\angle A = 110^\circ - 35^\circ$$

$$\angle A = 75^\circ$$

$$\angle C = 180 - (\angle A + \angle B)$$

$$\angle C = 180 - (75^\circ + 35^\circ)$$

$$\angle C = 70^\circ$$



8). Solution

Let the smallest angle be x°

Then other two angles are $2x^\circ$ and $3x^\circ$

$$x^\circ + 2x^\circ + 3x^\circ = 180^\circ \quad [\text{sum of three angle of a triangle is } 180^\circ]$$

$$6x^\circ = 180^\circ$$

$$x = \frac{180}{6}$$

$$= 30^\circ$$

angles are 30° , 60° and 90°

9) Solution

$AB \parallel CD$ and PQ is a transversal

$\angle APQ = \angle PQR$ [Pair of alternate angles]

$$50^\circ = X$$

Also $AB \parallel CD$ and PR is a transversal

$$\angle APR = \angle PRD$$

$$50^\circ + Y = 127^\circ$$

$$Y = 127^\circ - 50^\circ = 77^\circ$$

10) Solution

$$\angle AOD + \angle DOB = 180^{\circ} \quad \text{BY linear pair}$$

$$180^{\circ} = 4x - 5 + x$$

$$180^{\circ} + 5 = 5x$$

$$5x = 185$$

$$x = \frac{185}{5} = 37^{\circ}$$

$$\begin{aligned} \therefore \angle AOD &= 4x - 5 = 4 \times 37 - 5 = 148 - 5 \\ &= 143^{\circ} \end{aligned}$$

$$\angle BOC = 143^{\circ} \quad \therefore \angle AOD \text{ and } \angle BOC$$

$$\angle BOD = x = 37^{\circ} \quad \text{vertically opposite Angles}$$

$$\angle BOD = \angle AOC = 37^{\circ}$$