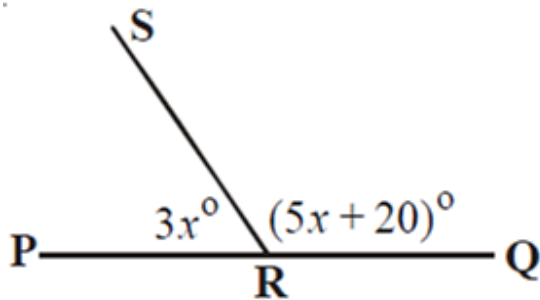


## Contoh Soal dan Pembahasan Sudut Saling Berpelurus

### Contoh Soal 1

Perhatikan gambar di bawah ini



Diketahui  $\angle PRS = 3x^\circ$  dan  $\angle QRS = (5x + 20)^\circ$  Tentukan nilai  $x$ ,  
besar  $\angle QRS$  dan pelurus  $\angle QRS$

*Penyelesaian:*

$$\angle PRS + \angle QRS = 180^\circ \text{ (sudut saling pelurus)}$$

$$3x^\circ + (5x + 20)^\circ = 180^\circ$$

$$8x^\circ + 20^\circ = 180^\circ$$

$$8x^\circ = 160^\circ$$

$$x = 20$$

$$\angle QRS = (5x + 20)^\circ$$

$$\angle QRS = (5 \cdot 20 + 20)^\circ$$

$$\angle QRS = (100 + 20)^\circ$$

$$\angle QRS = 120^\circ$$

pelurus  $\angle QRS = \angle PRS$

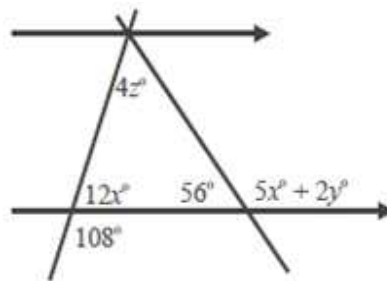
pelurus  $\angle QRS = 3x^\circ$

pelurus  $\angle QRS = 3 \cdot 20^\circ$

pelurus  $\angle QRS = 60^\circ$

### Contoh Soal 2

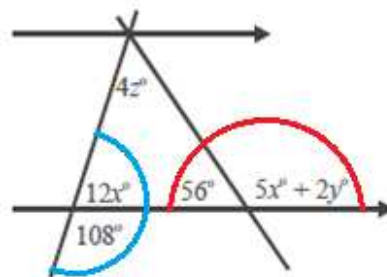
Perhatikan gambar di bawah ini



Tentukan nilai  $x^\circ + y^\circ + z^\circ$  pada gambar di atas.

*Penyelesaian:*

Perhatikan gambar berikut ini.



$$108^\circ + 12x^\circ = 180^\circ \text{ (berpelurus)}$$

$$12x^\circ = 180^\circ - 108^\circ$$

$$12x^\circ = 72^\circ$$

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

$$56^\circ + 5x^\circ + 2y^\circ = 180^\circ \text{ (berpelurus)}$$

$$56^\circ + 5 \cdot 6^\circ + 2y^\circ = 180^\circ$$

$$56^\circ + 30^\circ + 2y^\circ = 180^\circ$$

$$86^\circ + 2y^\circ = 180^\circ$$

$$2y^\circ = 180^\circ - 86^\circ$$

$$2y^\circ = 94^\circ$$

$$y^\circ = 47^\circ$$

$$56^\circ + 12x^\circ + 4z^\circ = 180^\circ \text{ (jumlah sudut segitiga)}$$

$$56^\circ + 12 \cdot 6^\circ + 4z^\circ = 180^\circ$$

$$128^\circ + 4z^\circ = 180^\circ$$

$$4z^\circ = 180^\circ - 128^\circ$$

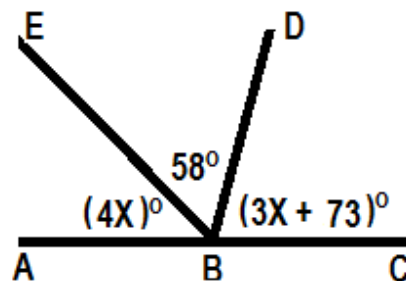
$$4z^\circ = 52^\circ$$

$$z^\circ = 13^\circ$$

$$x^\circ + y^\circ + z^\circ = 6^\circ + 47^\circ + 13^\circ = 66^\circ$$

### Contoh Soal 3

Perhatikan gambar di bawah ini



Diketahui  $\angle ABE = 4x^\circ$ ,  $\angle DBE = 58^\circ$  dan  $\angle CBD = (3x + 73)^\circ$ . Tentukan nilai  $x$ , besar  $\angle ABE$ , besar  $\angle CBD$ , pelurus  $\angle ABE$ , pelurus  $\angle DBE$ , dan pelurus  $\angle CBD$ .

*Penyelesaian:*

$$\angle ABE + \angle DBE + \angle CBD = 180^\circ \text{ (sudut saling pelurus)}$$

$$4x^\circ + 58^\circ + (3x + 73)^\circ = 180^\circ$$

$$7x^\circ + 131^\circ = 180^\circ$$

$$7x^\circ = 180^\circ - 131^\circ$$

$$7x^\circ = 49^\circ$$

$$x^\circ = 7^\circ$$

$$\angle ABE = 4x^\circ$$

$$\angle ABE = 4 \cdot 7^\circ$$

$$\angle ABE = 28^\circ$$

$$\angle CBD = (3x + 73)^\circ$$

$$\angle CBD = (3 \cdot 7 + 73)^\circ$$

$$\angle CBD = (21 + 73)^\circ$$

$$\angle CBD = 94^\circ$$

$$\text{pelurus } \angle ABE = 180^\circ - \angle ABE$$

$$\text{pelurus } \angle ABE = 180^\circ - 28^\circ$$

$$\text{pelurus } \angle ABE = 152^\circ$$

$$\text{pelurus } \angle DBE = 180^\circ - \angle DBE$$

$$\text{pelurus } \angle DBE = 180^\circ - 58^\circ$$

$$\text{pelurus } \angle DBE = 122^\circ$$

$$\text{pelurus } \angle CBD = 180^\circ - \angle CBD$$

$$\text{pelurus } \angle CBD = 180^\circ - 94^\circ$$

$$\text{pelurus } \angle CBD = 86^\circ$$