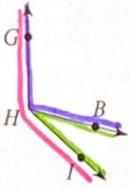


## Angle Addition Practice

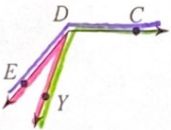
- 1)  $m\angle GHB = 103^\circ$  and  $m\angle BHI = 28^\circ$ .  
Find  $m\angle GHI$ .



$$\begin{aligned} \angle GHB + \angle BHI &= \angle GHI \\ 103 + 28 &= \angle GHI \\ 131^\circ &= \angle GHI \end{aligned}$$

angle addition

- 2)  $m\angle CDY = 110^\circ$  and  $m\angle CDE = 131^\circ$ .  
Find  $m\angle YDE$ .



$$\begin{aligned} \angle CDY + \angle YDE &= \angle CDE \\ 110^\circ + \angle YDE &= 131^\circ \\ \angle YDE &= 21^\circ \end{aligned}$$

angle addition

- 3) Find  $x$  if  $m\angle YEF = 6x + 3$ ,  
 $m\angle DEY = 105^\circ$ , and  $m\angle DEF = 27x + 3$ .



$$\angle DEY + \angle YEF = \angle DEF \text{ angle addition}$$

$$105 + 6x + 3 = 27x + 3$$

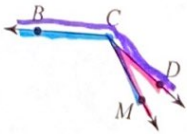
$$6x + 108 = 27x + 3$$

$$108 = 21x + 3$$

$$105 = 21x$$

$$\boxed{5 = x}$$

- 4) Find  $x$  if  $m\angle MCB = x + 130$ ,  
 $m\angle DCM = x + 30$ , and  $m\angle DCB = 140^\circ$ .



$$\angle MCB + \angle DCM = \angle DCB$$

$$x + 130 + x + 30 = 140$$

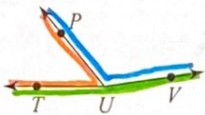
$$2x + 160 = 140$$

$$2x = -20$$

$$\boxed{x = -10}$$

angle addition

- 5)  $m\angle TUP = 50^\circ$ ,  $m\angle TUV = 172x$ ,  
and  $m\angle PUV = 121x + 1$ . Find  $m\angle TUV$ .



$$\angle TUP + \angle PUV = \angle TUV$$

$$50 + 121x + 1 = 172x$$

$$121x + 51 = 172x$$

$$51 = 51x$$

$$1 = x$$

Now Find  $m\angle TUV$

$$\angle TUV = 172(1)$$

$$\boxed{m\angle TUV = 172^\circ}$$

angle addition

- 6)  $m\angle EFR = 8x - 4$ ,  $m\angle EFG = 61^\circ$ ,  
and  $m\angle RFG = 7x + 5$ . Find  $m\angle RFG$ .



$$\angle EFR + \angle RFG = \angle EFG$$

$$8x - 4 + 7x + 5 = 61$$

$$15x + 1 = 61$$

$$15x = 60$$

$$x = 4$$

Now Find  $m\angle RFG$

$$\angle RFG = 7(4) + 5$$

$$\boxed{m\angle RFG = 33^\circ}$$

angle addition