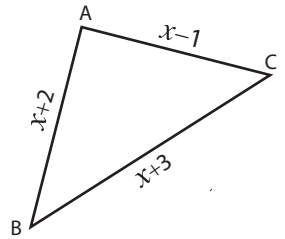
Name : _____ Score : _____

Triangle - Computing Sides

Sheet 1

Example:



Perimeter = 16 in

Perimeter = Sum of length of the sides

16 in = $x - 1 + x + 2 + x + 3$

16 in = $3x + 4$

$3x = 16 - 4$

$x = \frac{12}{3}$ = **4 in**

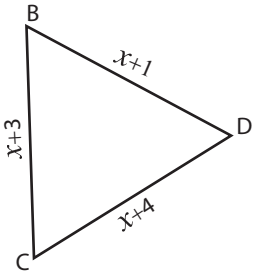
$\overline{AB} = x+2 = 4 + 2 =$ **6 in**

$\overline{BC} = x+3 = 4 + 3 =$ **7 in**

$\overline{AC} = x-1 = 4 - 1 =$ **3 in**

Find the value of x and compute the length of the sides for each triangle.

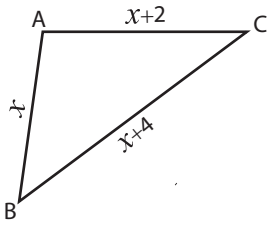
1)



Perimeter = 17 m ; x = _____

$\overline{BC}$ = _____ ; $\overline{CD}$ = _____ ; $\overline{BD}$ = _____

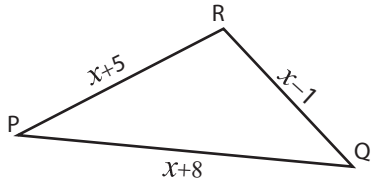
2)



Perimeter = 21 cm ; x = _____

$\overline{AB}$ = _____ ; $\overline{BC}$ = _____ ; $\overline{AC}$ = _____

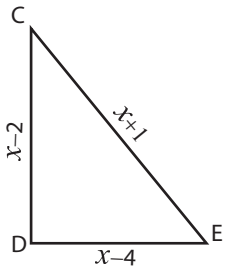
3)



Perimeter = 36 yd ; x = _____

$\overline{PQ}$ = _____ ; $\overline{QR}$ = _____ ; $\overline{PR}$ = _____

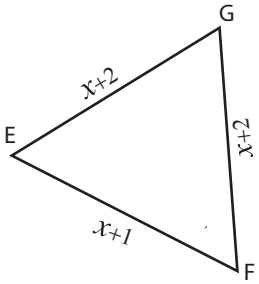
4)



Perimeter = 31 ft ; x = _____

$\overline{CD}$ = _____ ; $\overline{DE}$ = _____ ; $\overline{CE}$ = _____

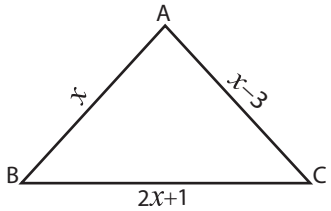
5)



Perimeter = 32 m ; x = _____

$\overline{EF}$ = _____ ; $\overline{FG}$ = _____ ; $\overline{EG}$ = _____

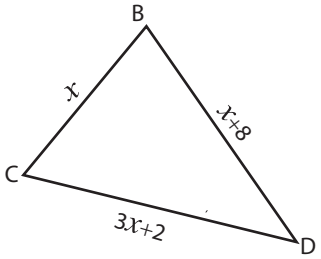
6)



Perimeter = 58 in ; x = _____

$\overline{AB}$ = _____ ; $\overline{BC}$ = _____ ; $\overline{AC}$ = _____

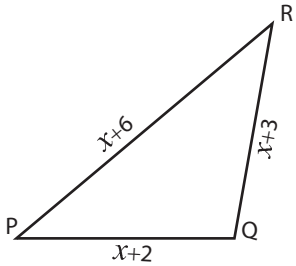
7)



Perimeter = 30 yd ; x = _____

$\overline{BC}$ = _____ ; $\overline{CD}$ = _____ ; $\overline{BD}$ = _____

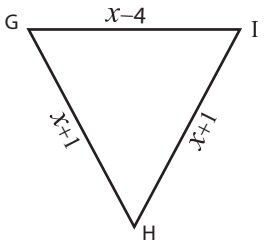
8)



Perimeter = 41 ft ; x = _____

$\overline{PQ}$ = _____ ; $\overline{QR}$ = _____ ; $\overline{PR}$ = _____

9)



Perimeter = 40 cm ; x = _____

$\overline{GH}$ = _____ ; $\overline{HI}$ = _____ ; $\overline{GI}$ = _____

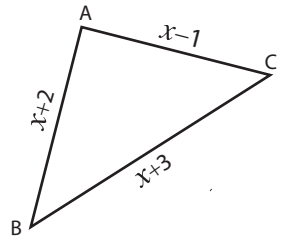
Name : _____ Score : _____

Answer key

Triangle - Computing Sides

Sheet 1

Example:



Perimeter = 16 in

Perimeter = Sum of length of the sides

$16 \text{ in} = x - 1 + x + 2 + x + 3$

$16 \text{ in} = 3x + 4$

$3x = 16 - 4$

$x = \frac{12}{3} = \mathbf{4 \text{ in}}$

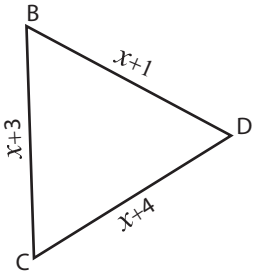
$\overline{AB} = x+2 = 4 + 2 = \mathbf{6 \text{ in}}$

$\overline{BC} = x+3 = 4 + 3 = \mathbf{7 \text{ in}}$

$\overline{AC} = x-1 = 4 - 1 = \mathbf{3 \text{ in}}$

Find the value of x and compute the length of the sides for each triangle.

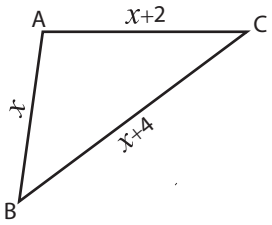
1)



Perimeter = 17 m ; x = **3 m**

$\overline{BC}$ = **6 m** ; $\overline{CD}$ = **7 m** ; $\overline{BD}$ = **4 m**

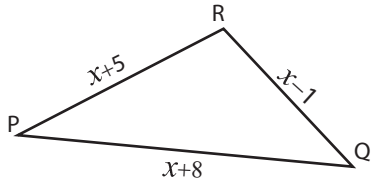
2)



Perimeter = 21 cm ; x = **5 cm**

$\overline{AB}$ = **5 cm** ; $\overline{BC}$ = **9 cm** ; $\overline{AC}$ = **7 cm**

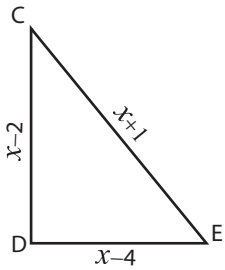
3)



Perimeter = 36 yd ; x = **8 yd**

$\overline{PQ}$ = **16 yd** ; $\overline{QR}$ = **7 yd** ; $\overline{PR}$ = **13 yd**

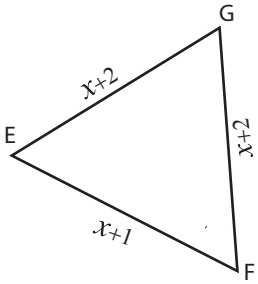
4)



Perimeter = 31 ft ; x = **12 ft**

$\overline{CD}$ = **10 ft** ; $\overline{DE}$ = **8 ft** ; $\overline{CE}$ = **13 ft**

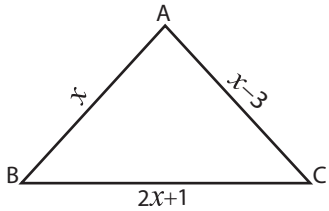
5)



Perimeter = 32 m ; x = **9 m**

$\overline{EF}$ = **10 m** ; $\overline{FG}$ = **11 m** ; $\overline{EG}$ = **11 m**

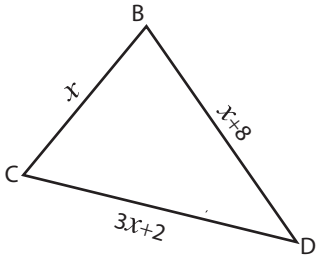
6)



Perimeter = 58 in ; x = **15 in**

$\overline{AB}$ = **15 in** ; $\overline{BC}$ = **31 in** ; $\overline{AC}$ = **12 in**

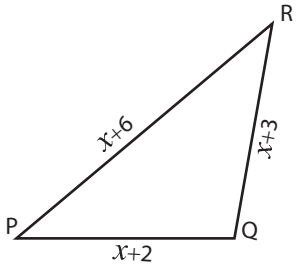
7)



Perimeter = 30 yd ; x = **4 yd**

$\overline{BC}$ = **4 yd** ; $\overline{CD}$ = **14 yd** ; $\overline{BD}$ = **12 yd**

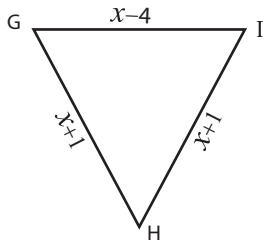
8)



Perimeter = 41 ft ; x = **10 ft**

$\overline{PQ}$ = **12 ft** ; $\overline{QR}$ = **13 ft** ; $\overline{PR}$ = **16 ft**

9)



Perimeter = 40 cm ; x = **14 cm**

$\overline{GH}$ = **15 cm** ; $\overline{HI}$ = **15 cm** ; $\overline{GI}$ = **10 cm**