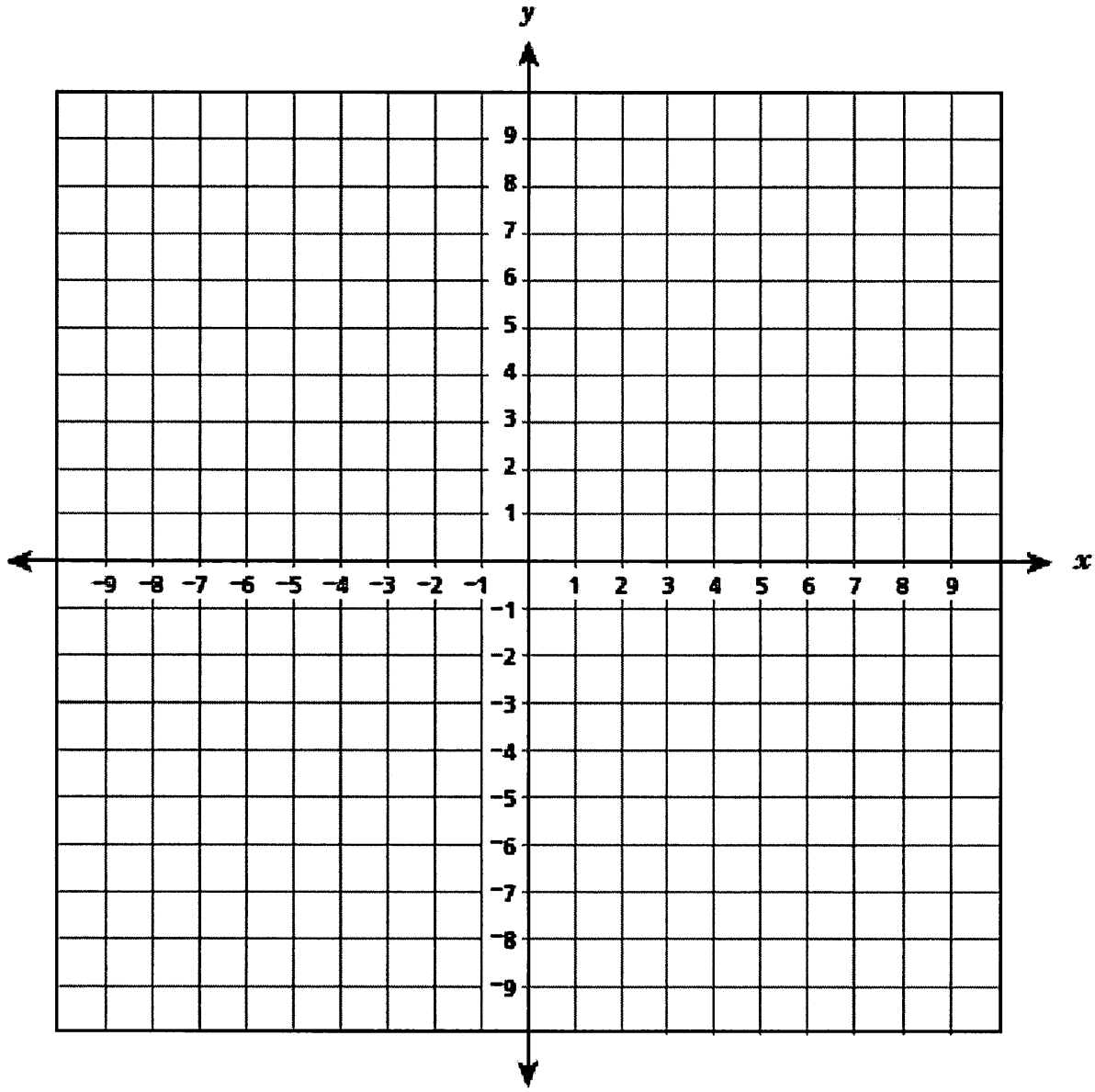
I can draw polygons in the coordinate plane and use various strategies to calculate the area of the polygon and determine the lengths of the sides to find the perimeter of the polygon.

Determining Perimeter and Area in the Coordinate Plane

1. Graph the polygon ABCDEF, which has vertices at the following coordinates, on the coordinate grid below.

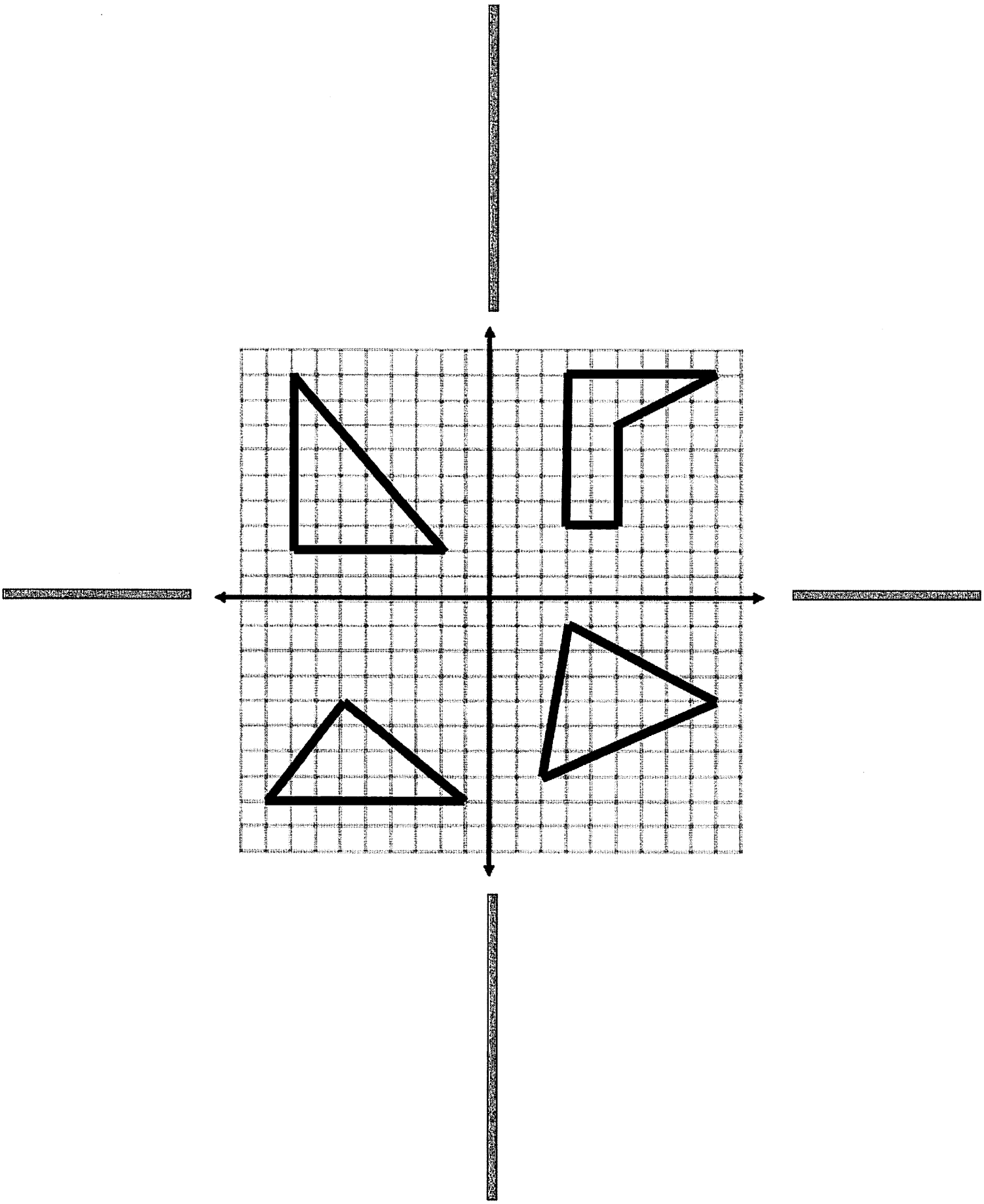
A(−4, 7), B(6, 7), C(6, −2), D(−8, −2), E(−8, 3), F(−4, 3)



What is the perimeter of polygon ABCDEF?

Answer _____ units

2. Find the Area of Each Shape



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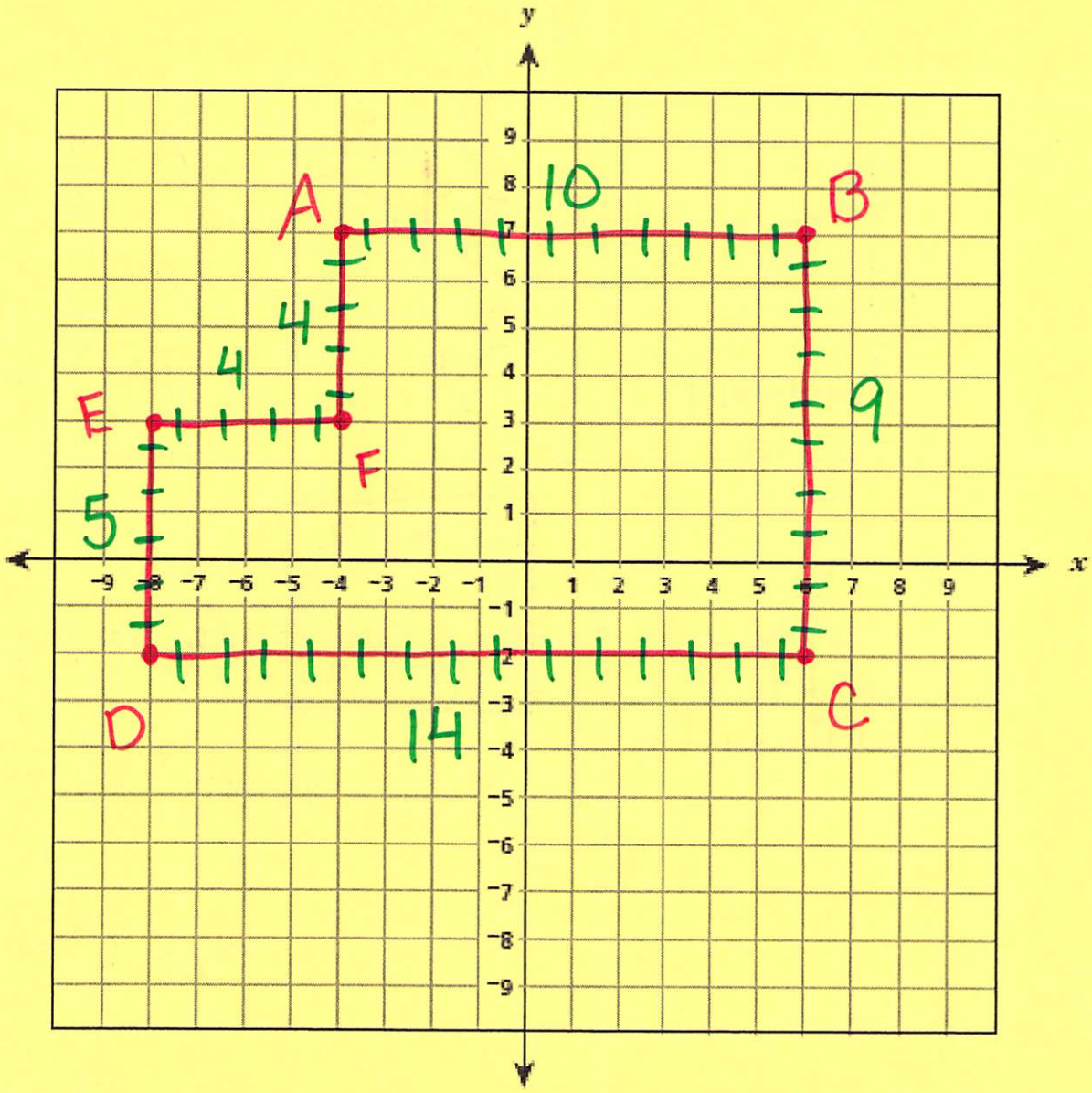


What is the perimeter of polygon ABCDEF?

10 + 9 + 14 + 5 + 4 + 4

Answer 46 units

2. Find the Area of Each Shape

$A = \frac{b \cdot h}{2}$ $b = 6$ $h = 7$

$A = \frac{6 \cdot 7}{2}$

A = 21 $units^2$

$A = b \cdot h$

$A = 2 \cdot 6$

A = 12 $units^2$

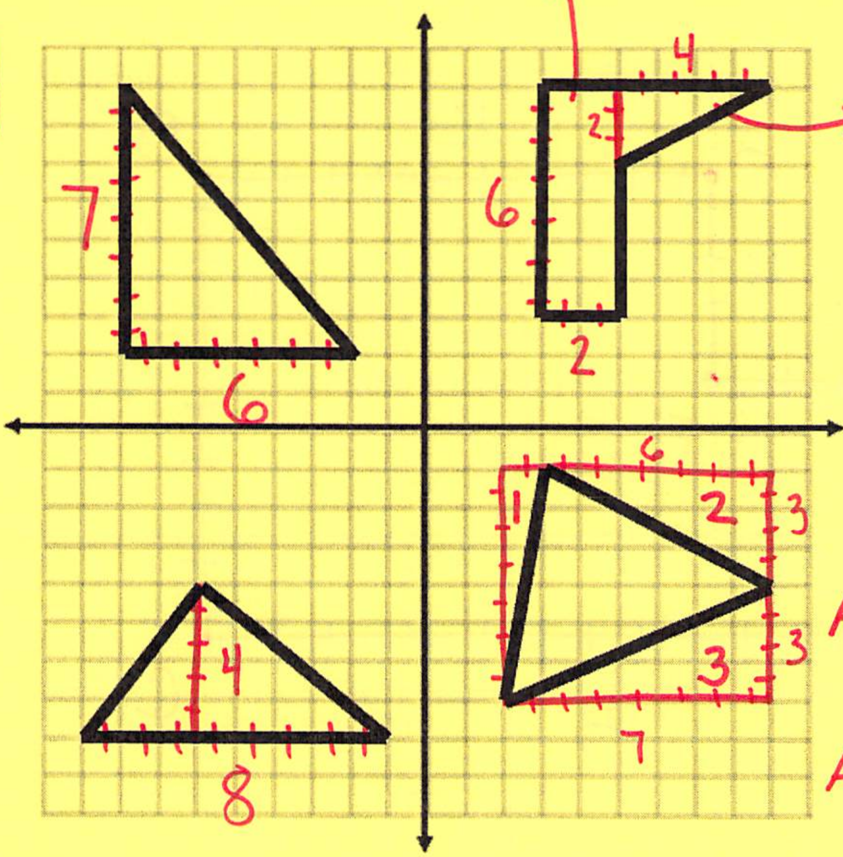
Total Area

16 $units^2$

$A = \frac{b \cdot h}{2}$

$A = \frac{4 \cdot 2}{2}$

A = 4 $units^2$



$A_{box} = 7 \cdot 6 = 42$

$A_{\Delta 1}$ $\frac{1 \cdot 6}{2} = 3$

$A_{\Delta 2}$ $\frac{3 \cdot 6}{2} = 9$

$A_{\Delta 3}$ $\frac{3 \cdot 7}{2} = 10.5$

$A = \frac{b \cdot h}{2}$

$A = \frac{8 \cdot 4}{2}$

A = 16 $units^2$

Area of Δ = 42 - 3 - 9 - 10.5 = 19.5 $units^2$