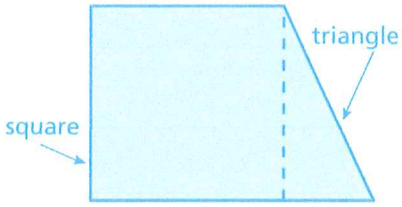
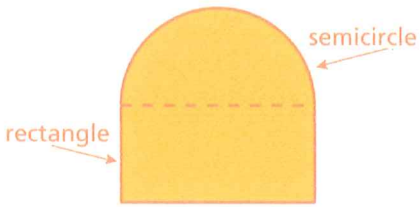
13.2 Perimeter of Composite Figures p. 558

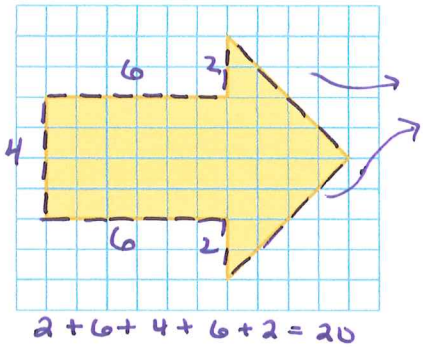
A **composite figure** is made up of triangles, squares, rectangles, semicircles and other two-dimensional figures. Here are 2 examples:





To find the perimeter of a composite figure, find the distance around the figure.

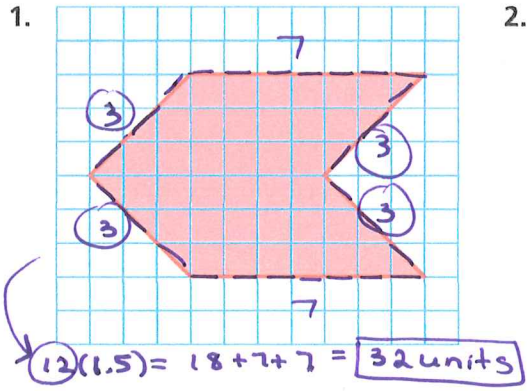
When estimating a perimeter using grid paper, estimate the **diagonal length** to be **1.5 units**.



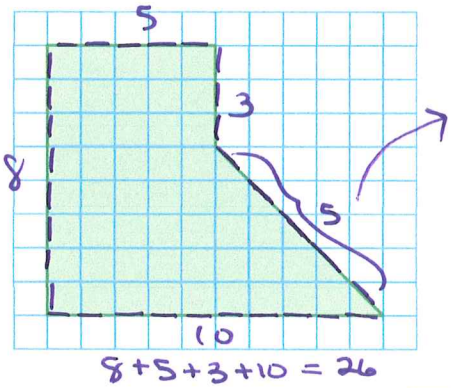
8(1.5) = 12
+ 20
32 units

Try these on your own:

1.

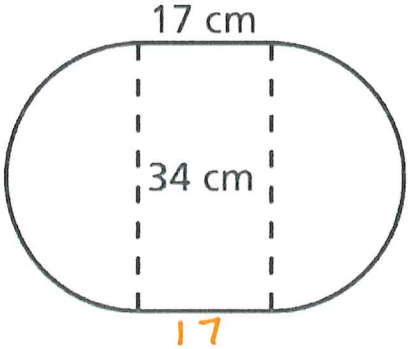


2.

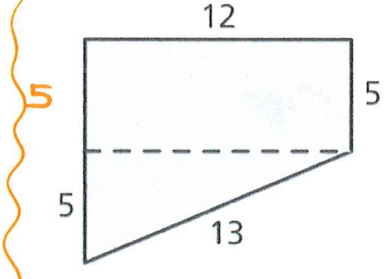


5(1.5) = 7.5
+ 26.0
33.5 units

For the rest of the examples, find the actual perimeter of each **composite figure**.



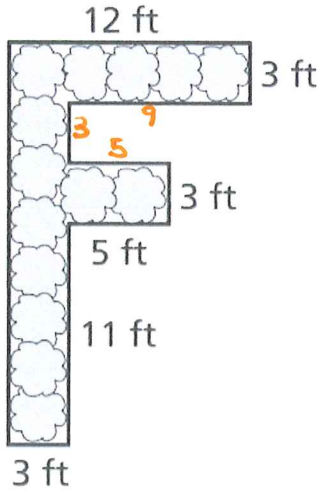
3.14(34) =
106.76
17
17
140.76 cm



12+5+5+5+13 =
40 units

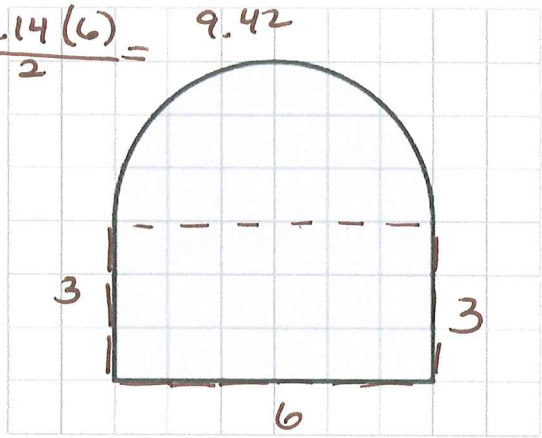
10 sides

20 + 12 + 3 + 9 + 3 + 5 + 3 + 5 + 11 + 3

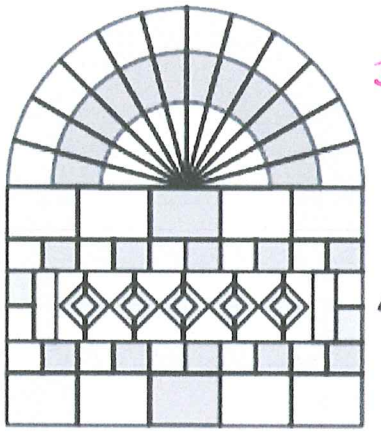


74 ft

$\frac{3.14(6)}{2} = 9.42$

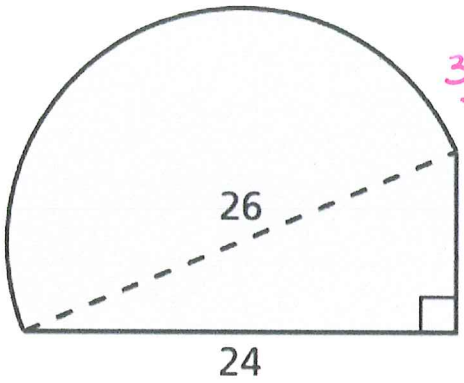


3+6+3 = 12 + 9.42 = 21.42 units



$\frac{3.14(6)}{2} = 9.42$

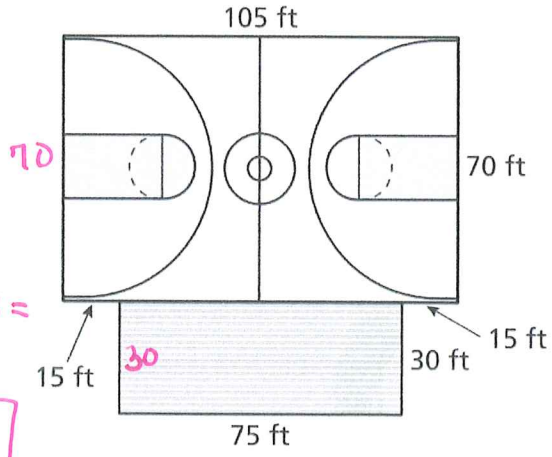
6 + 4 + 4 = 14 + 9.42 = 23.42 ft



$\frac{3.14(26)}{2} = 40.82$

24 + 10 + 40.82 = 74.82 units

The dimensions of a new city park basketball court are shown at the right. A fence is to be built around the court and bleachers. The fence costs $8.99 per foot. How much will it cost to install the fence?



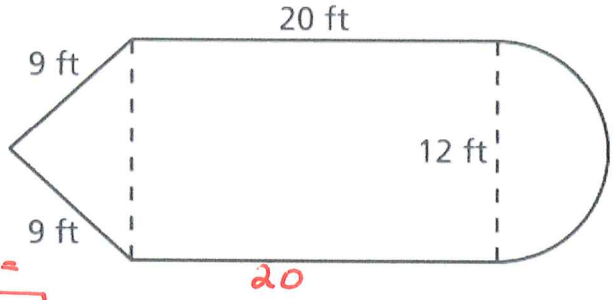
105 + 70 + 70 + 15 + 15 + 30 + 30 + 75 =

P = 410 ft

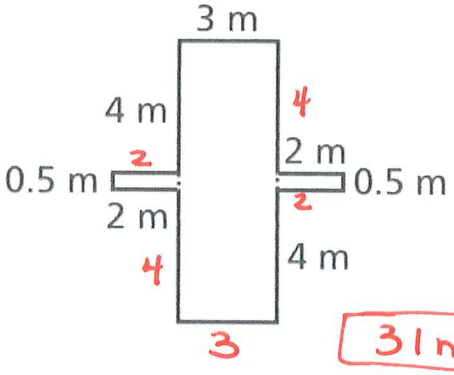
410 (8.99) = $3685.90

9 + 9 + 20 + 20 = 58

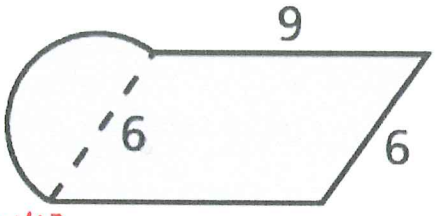
A school has a garden in the shape of a pencil. A fence is to be built around the garden. The fence costs $2.75 per foot. How much will it cost to install the fence? 18.84 + 58 = 76.84 (2.75) = $211.31



$\frac{3.14(12)}{2} = 18.84$

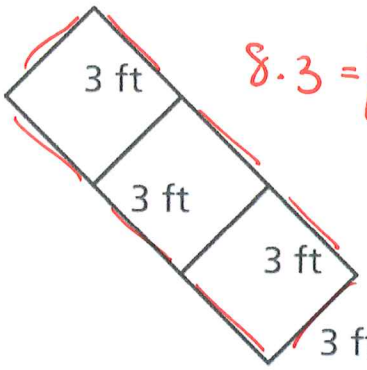


31 m

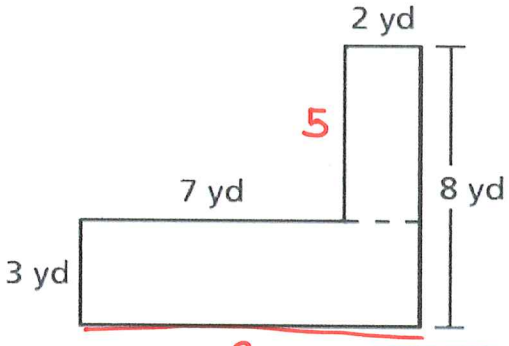


$\frac{3.14(6)}{2} = 9.42$

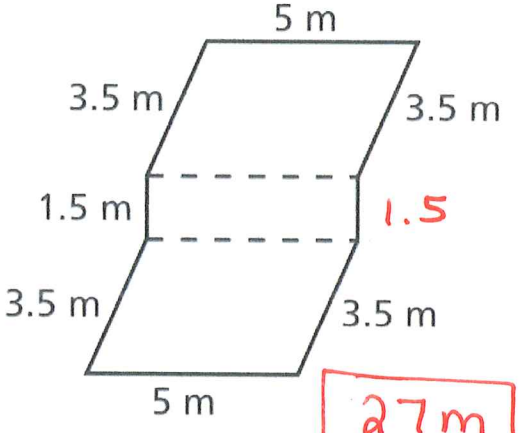
9 + 9 + 6 = 24 + 9.42 = 33.42 units



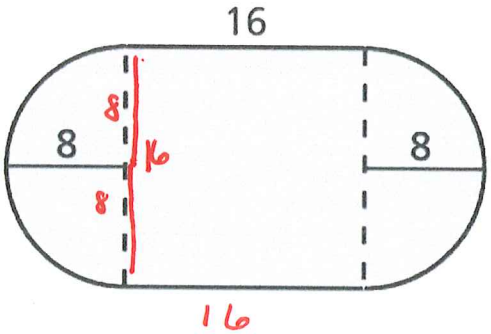
8.3 = 24 ft



34 yds



27 m



3.14(16) = 50.24 + 32 = 82.24 units