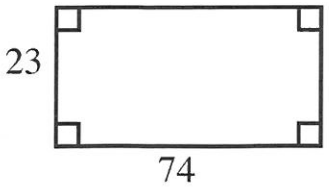
May 8th-14th Homework

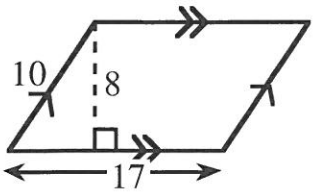
Name: Answers

1. Find the perimeter and area of the following figures:



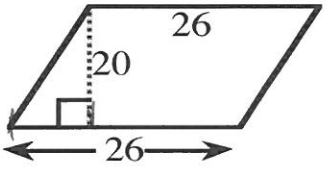

Perimeter: 194 units

Area: 1,702 units$^2$




Perimeter: 54 units

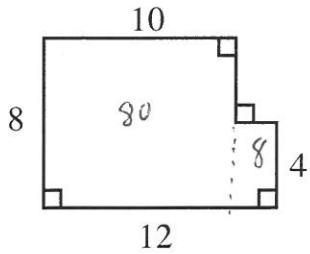
Area: 136 units$^2$



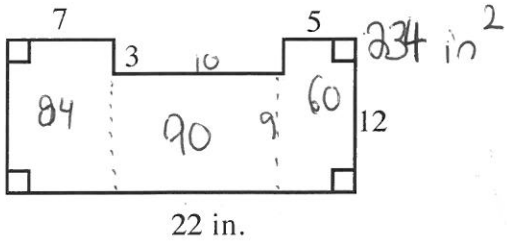

Area: 520 units$^2$

Perimeter: not enough info

2. Find the area of the following figures.

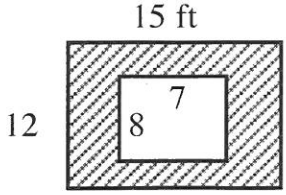



88 units$^2$




234 in$^2$

3. Find the area of the shaded region. (The figures are rectangles.)

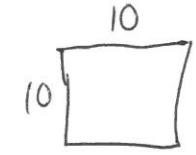



////  − □

180 − 56 = 124 ft$^2$

Imagine you had 40 one-metre sections of fencing.

square



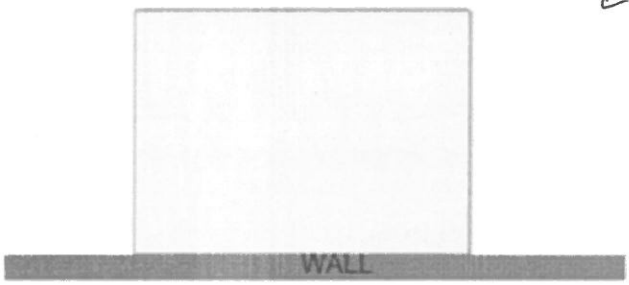

Max area = $100\,m^2$

**What is the largest rectangular area of land you could fence off?**

Now imagine you could build your fence up against a wall, so you only need to use the fence for three sides of the enclosure:

↙ should be a square

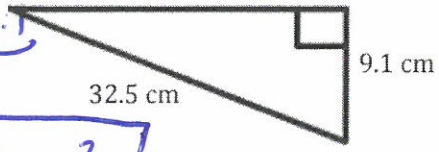
$\frac{40}{3} = 13\frac{1}{3}$ m each side




**What is the largest area you can fence off now?** $\approx 177.8\,m^2$

Calculate the area of each right triangle below. Note that the figures are not drawn to scale.

1.

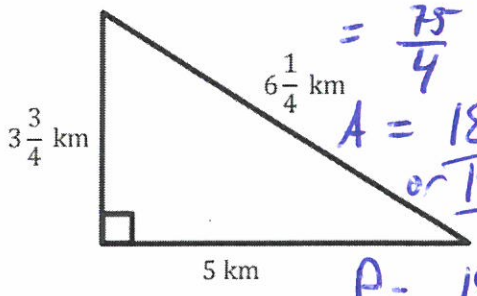



$A = \frac{312 \cdot 9.1}{2}$

$A = 142.0\ cm^2$

$P = 72.8\ cm$

2.




$A = \frac{15}{4} \times \frac{5}{1}$

$= \frac{75}{4}$

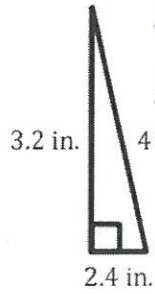
$A = 18\frac{3}{4}\ km^2$

or $\frac{18.75}{2}$

$P = 15\ km$

$A = 9.375\ km^2$

3.



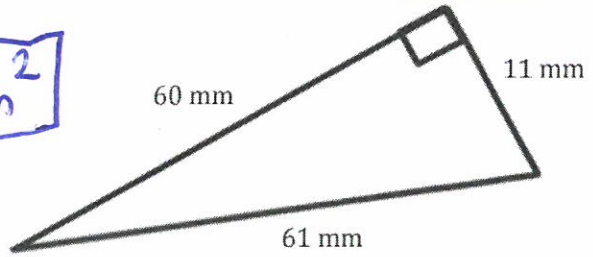

$A = \frac{3.2 \cdot 2.4}{2}$

$A = \frac{7.68\ in^2}{2}$

$A = 3.84\ in^2$

$P = 9.6\ in$

4.



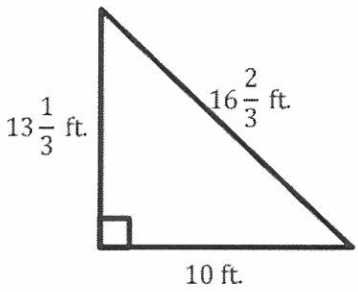

$A = \frac{60 \cdot 11}{2}$

$A = \frac{660\ mm^2}{2}$

$A = 330\ mm^2$

$P = 132\ mm$

5.




$A = \frac{40}{3} \cdot \frac{10}{3}$

$= \frac{400}{3}$

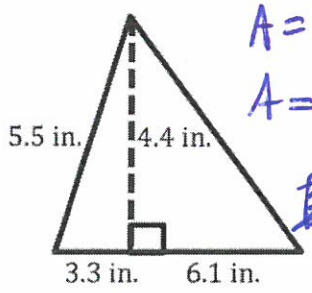
$A = 133\frac{1}{3}\ ft^2$ or $\frac{133.3}{2}$

$A = 66\frac{2}{3}\ ft^2$ or $66.\overline{6}\ ft^2$

$P = 40\ ft$

Calculate the area of each shape below. Figures are not drawn to scale.

1.

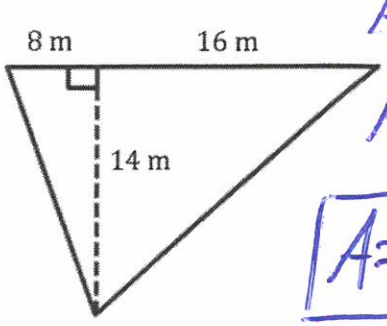



$A = \frac{4.4 \times (3.3 + 6.1)}{2}$

$A = \frac{41.36\ in^2}{2}$

$A = 20.68\ in^2$

2.

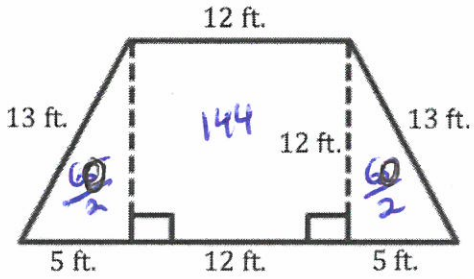



$A = \frac{(8+16) \cdot 14}{2}$

$A = \frac{336\ m^2}{2}$

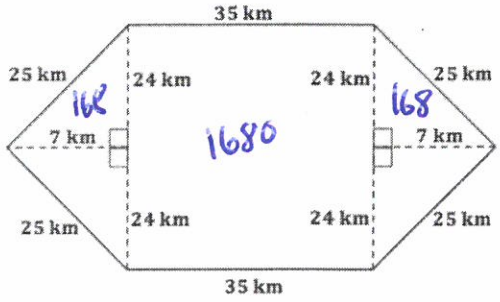
$A = 168\ m^2$

3.



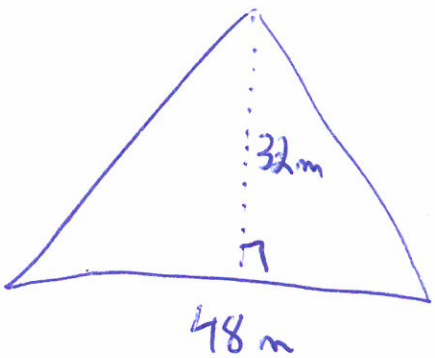

$A = 204\ ft^2$

4.




$A = 2016\ km^2$

5. Immanuel is building a fence to make an enclosed play area for his dog. The enclosed area will be in the shape of a triangle with a base of 48 m. and an altitude of 32 m. How much space does the dog have to play?




$A = \frac{48 \cdot 32}{2}$

$A = 768\ m^2$