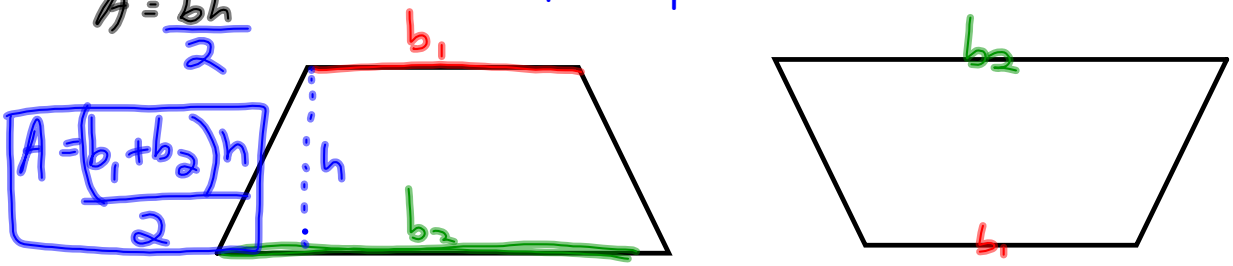
Area of a Trapezoid

$A = \frac{bh}{2}$

$A = \frac{(b_1+b_2)h}{2}$



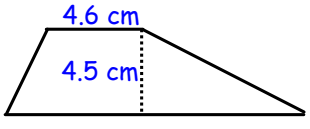
A trapezoid can be made by cutting a parallelogram in 2. A trapezoid has only one pair of sides parallel.

$A = {}^1/_2(b_1+b_2)h$

Area = half the sum of base 1 and base 2 times the height

Find the area of each trapezoid:

1.



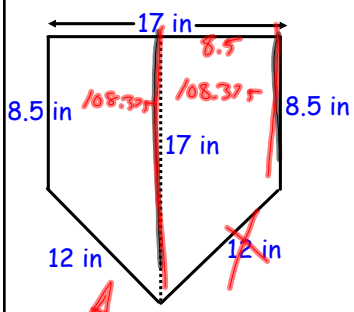
$A = \frac{(b_1+b_2)h}{2}$

$A = \frac{(9.4+4.6)4.5}{2}$

$A = \frac{14(4.5)}{2}$

$A = 31.5\,cm^2$

2. A baseball home plate can be divided into two trapezoids with the dimensions shown. Find the area of each trapezoid and the area of home plate.



$A = \frac{(b_1+b_2)h}{2}$

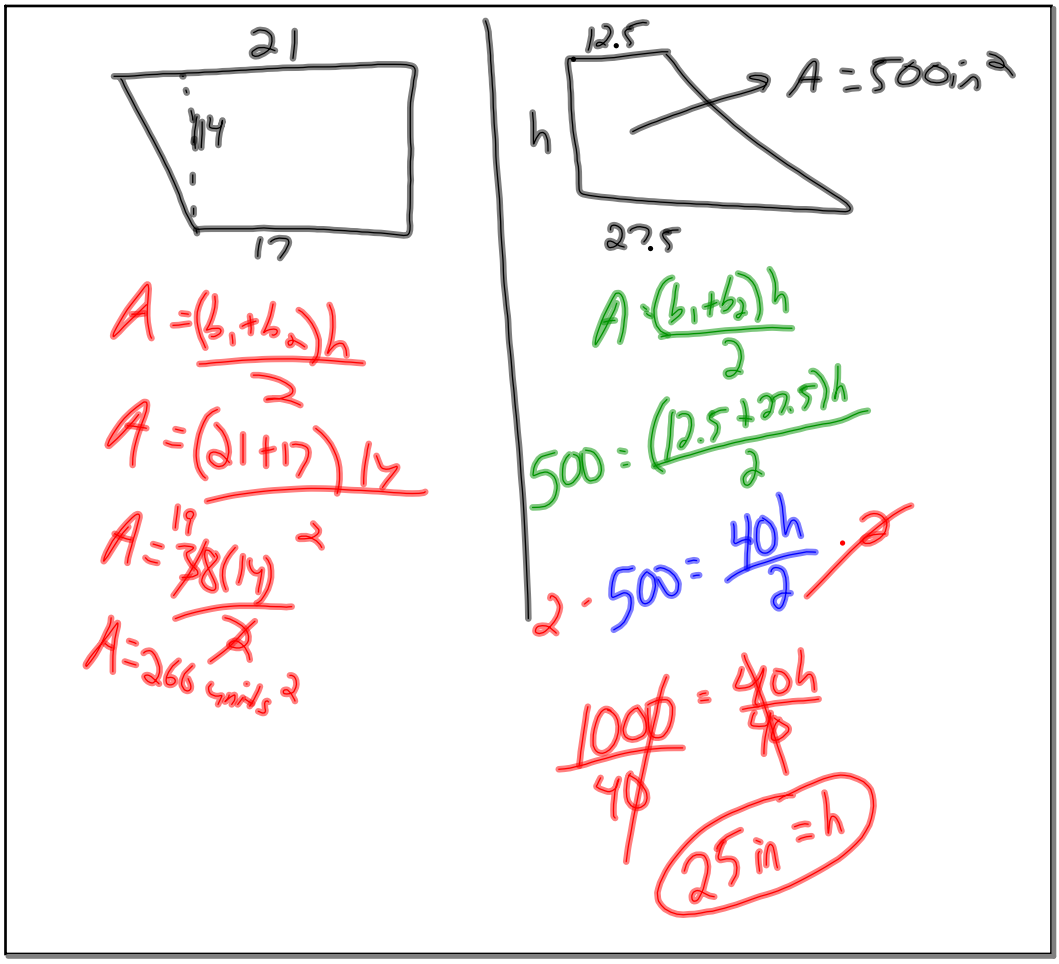
$A = \frac{(17+8.5)8.5}{2}$

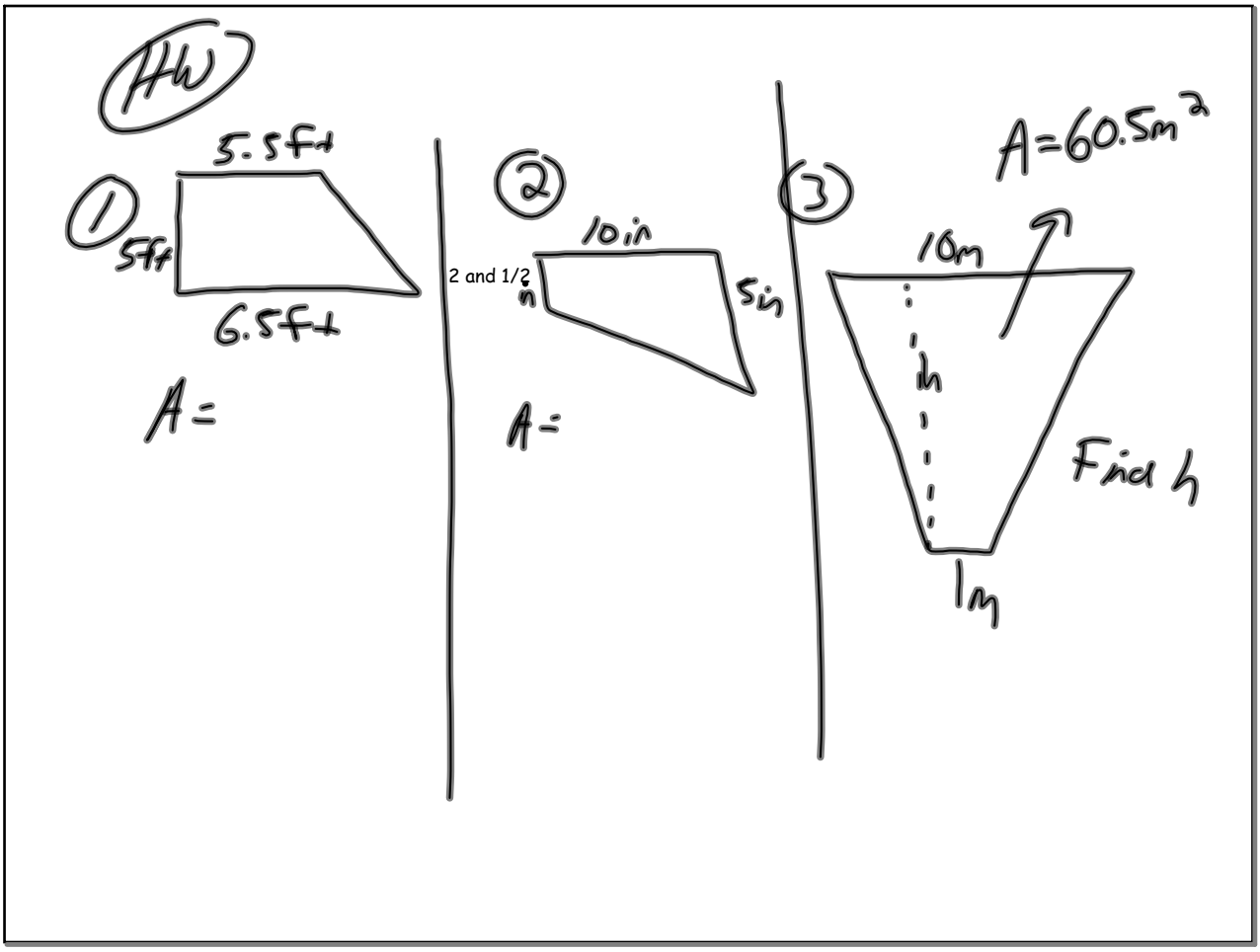
$A = \frac{(25.5)(8.5)}{2}$

$A = \frac{216.75}{2} = 108.375\,in^2$

$A_{\text{Home Plate}}: 2(108.375)$

$= 216.75\,in^2$


21
14
17
$A=\frac{(b_1+b_2)h}{2}$
$A=\frac{(21+17)14}{2}$
$A=\frac{38(14)}{2}$
$A=266\ units^2$
12.5
h
27.5
$A=500in^2$
$A=\frac{(b_1+b_2)h}{2}$
$500=\frac{(12.5+27.5)h}{2}$
$2\cdot 500=\frac{40h}{2}\cdot 2$
$\frac{1000}{40}=\frac{40h}{40}$
25 in = h


HW
1
5.5ft
5ft
6.5ft
A=
2
10in
2 and 1/2 in
5in
A=
3
$A=60.5m^2$
10m
h
1m
Find h