MF page 236 #s 2 & 3

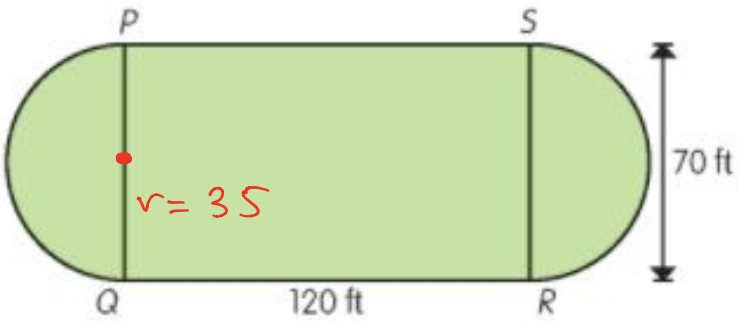
2 A field is composed of a rectangle with two semicircles at the sides. Given that each square foot of grass costs $0.50, how much will it cost to plant grass to cover the entire field? Use $\frac{22}{7}$ as an approximation for π.

circle

Area circle $= \pi r^2$

$= \left(\frac{22}{7}\right)(35)^2$

$A_O = 3850\ ft^2$



add

$A_{rectangle} = bh$

$= (120)(70)$

$A = 8400\ ft^2$

$3850 + 8400$

$12,250\ ft^2$

$Cost = 12,250\ (0.50) = \$6125$

3 Figure *VWXYZ* is made up of a triangle and a trapezoid. The area of trapezoid *VXYZ* is 56 square centimeters. The ratio of the height of trapezoid *VXYZ* to $\overline{RW}$ is 2 : 1. Find the area of figure *VWXYZ*.

$56 + 19.25 = 78.25\ cm^2$

Area trapezoid $= \frac{1}{2}(b_1 + b_2)h$

$56 = \frac{1}{2}(11+5)h$

$56 = \frac{1}{2}(16)h$

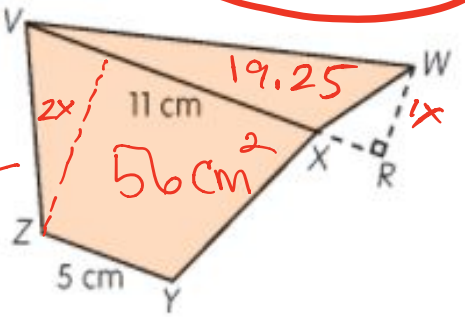
$\frac{56}{8} = \frac{8h}{8}$

$7 = h$

$A_\triangle = \frac{bh}{2}$

$\frac{(11)(3.5)}{2}$

19.25



$\frac{2}{1} = \frac{7}{x}$

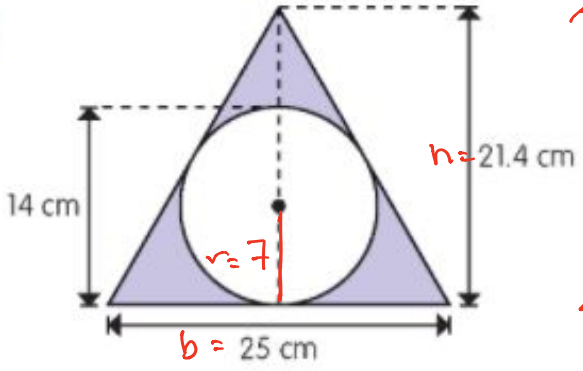
$\frac{2x}{2} = \frac{7}{2}$

$x = 3.5$

MF page 237 #s 3 & 5

Find the area of each shaded region. Use 3.14 as an approximation for π.

3



Area Triangle

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

$= \frac{(25)(21.4)}{2}$

$A_\Delta = 267.5 cm^2$

Area Circle

$A = \pi r^2$

$= (3.14)(7)^2$

$A_O = 153.86 cm^2$

Subtract

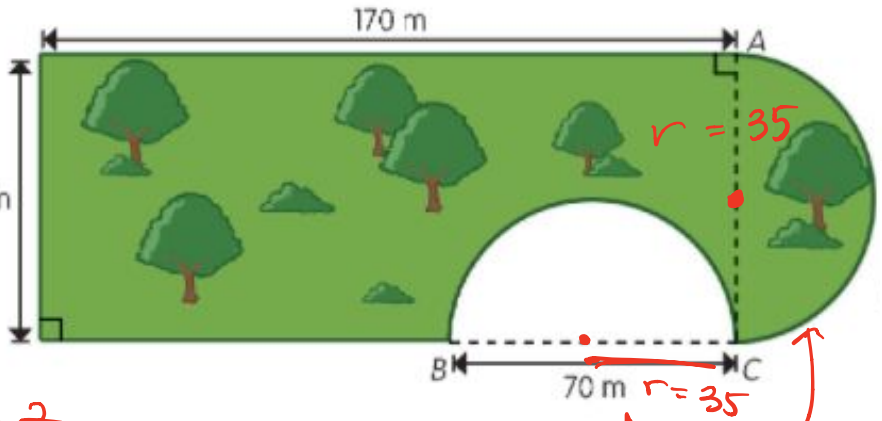
267.5

−153.86

113.64 cm^2 = Shaded Region

Solve.

5 A park is shaped like a rectangle with a semicircle on one end, and another semicircle cut out of one side. Find the area of the park. Use $\frac{22}{7}$ as an approximation for π.



$A_{\square} = bh$

$= 170(70)$

$A = 11{,}900 m^2$

$A_{circle} = \pi r^2$

$= \left(\frac{22}{7}\right)(35)^2$

$= 3850 m^2$

cancel each other out.