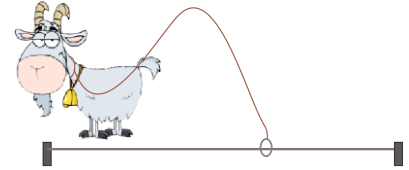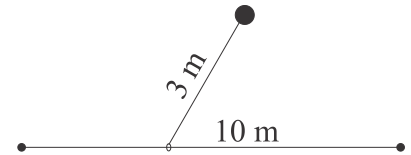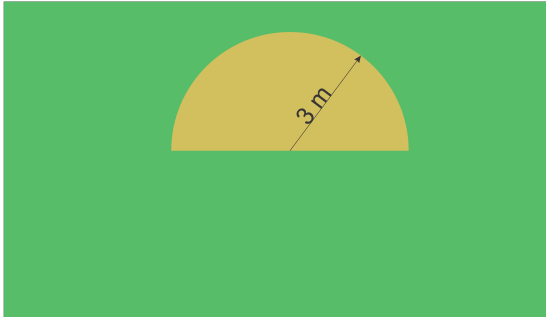Math 5a, homework 19.

1. We'll stretch a rope between two stakes in the meadow. To the second rope, we'll tie one end to the goat's collar, and on the other, we'll make a loop that can freely slide along the rope. What area will the goat graze?
   Draw the picture, 1 cm. for 1 m.

3 m

10 m

2. How this gout should be attached to graze the shapes below.

3 m

3. Sides of the rectangle have a ratio of 4:7, and its longer side is 31.5 cm. Find the shorter side, perimeter, and area of this rectangle.

4. Create several possible proportions from numbers:
   a. 2,   9,   3,   6;   *b.* 4,   0.5,   2,   1;

5. Solve the equations:
   a. $2\frac{5}{8} - \left(4\frac{3}{15} - y\right) = -1\frac{1}{4}$;   *b.* $\frac{2-x}{3} - \frac{6-x}{2} = 0$
   c. $|x + 1| = 5$;   *d.* $|4 - 3x| = 2$

6. Write the number 100 in binary system, system based on 3, system based on 4.