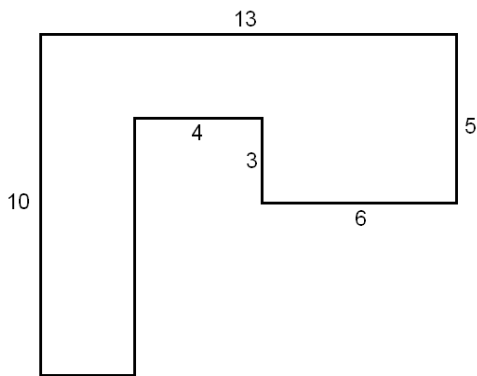


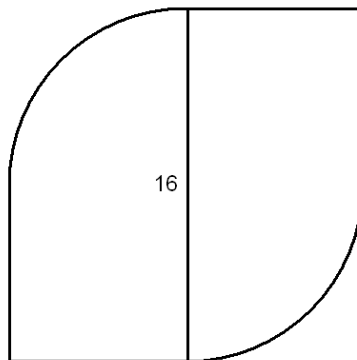
How Much Paint? A First Look at Area

January 31, 2011

1. What is the area of the following shape (all angles are right angles)?

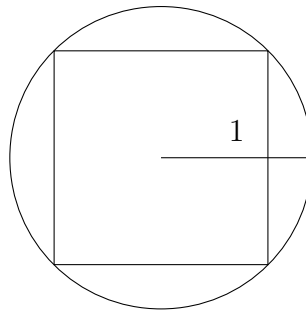


2. Find the area of the shape below. The upper left and lower right are circular arcs of a circle with diameter 16, and the upper right and lower left are straight lines meeting a right angles.



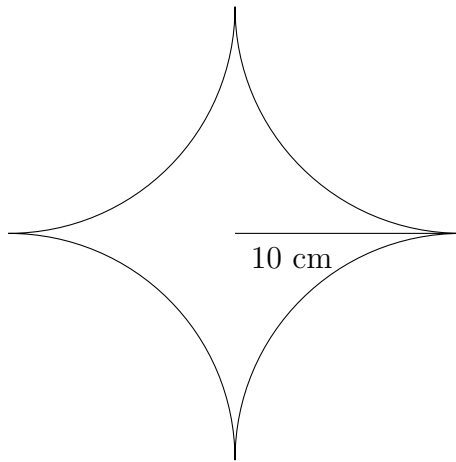
3. A cow is tied to the corner of a (rectangular) barn of dimensions 30 feet by 60 feet. If the rope is 90 feet long, how much grazing area does the cow have? (Draw a picture!)

4. What is the area of a square inscribed in a circle of radius 1?

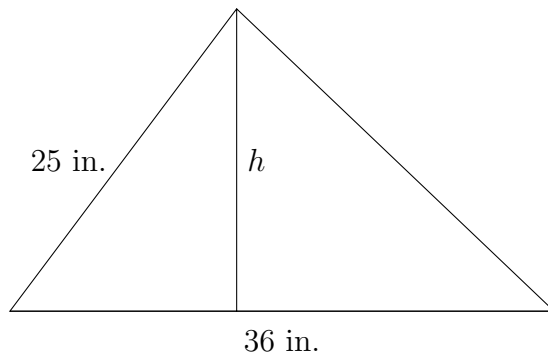


5. (a) How many squares of side length s fit in a square of side length $2s$?
- (b) How many squares of side length s fit in a square of side length $3s$?
- (c) How many squares of side length s fit in a square of side length $4s$?
- (d) How many squares of side length s fit in a square of side length ks , where k is an unspecified whole number?

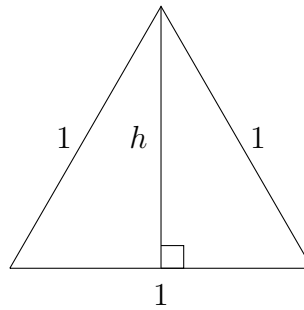
6. What is the area of the figure below, composed of four quarter-circle arcs? The circles which the arcs are part of have radius 10 cm.



7. The area of the triangle below is 360 square inches. What is the length of the missing side? (Hint: What is the height?)



8. What is the area of an equilateral triangle with side length 1? (Hint: How can you figure out the height, h ?)



9. What is the area of a regular hexagon inscribed in a circle of radius 1?

