



## Regents Practice Test 3

### Integrated Algebra

**Part II:** *Show work on separate paper.*

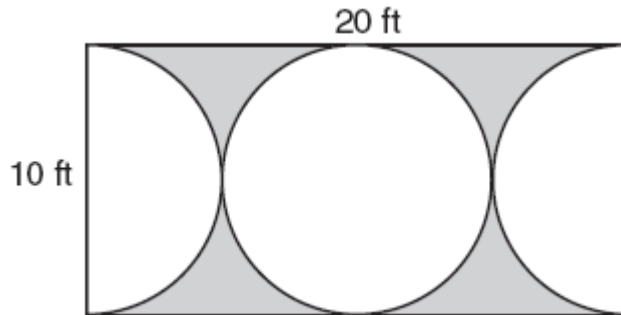
- 31 After a bad day on Wall Street, Mr. Magnum lost 30% of his money, but he had \$3500 left. How much money did he originally have at the beginning of the day?
- 32 Solve for  $m$ :  $4(m - 2) = -2(3 - m)$
- 33 When the angle of elevation of the sun is  $62^\circ$ , the shadow on the ground of a power pole is 85' long. Find the height of the power pole to the *nearest tenth* of a foot.

### Part III

- 34 Find the negative solution for the equation:  
$$x^2 - 4x - 32 = 0$$
- 35 License plates in a northern county of New York State are made with 2 letters followed by 4 digits (0 - 9). The first letter must be either "F" or "M", and the first digit must be an even, non-zero digit. How many different license plates can be made with these restrictions?
- 36 Brothers John and Jerry want to start a business cleaning swimming pools to earn money to purchase a 4-wheeler that costs \$2700. They already have \$660 in their savings. If they charge \$60 per pool, what is the minimum number of pools they would have to clean to have at least \$2700?

## Part IV

- 37 Mr. Escalante has a rectangular plot of land with length 20 feet and width 10 feet. He wants to design a flower garden in the shape of a circle with two semicircles at each end of the center circle, as shown in the accompanying diagram. He will fill in the shaded area with wood chips. If one bag of wood chips covers 5 square feet, how many bags must he buy?



- 38 A rocket is launched from the ground and follows a parabolic path represented by the equation  $y = -x^2 + 10x$ . At the same time, a flare is launched from a height of 10 feet and follows a straight path represented by the equation  $y = -x + 10$ . Graph the equations that represent the paths of the rocket and the flare, and find the coordinate(s) where the paths intersect.
- 39 On a Christmas package Audrey needs to use only 40-cent stamps and 16-cent stamps. If she uses twice as many 40-cent stamps as 16-cent stamps, how many of each type of stamp must she use to mail a package costing \$5.76 in postage?