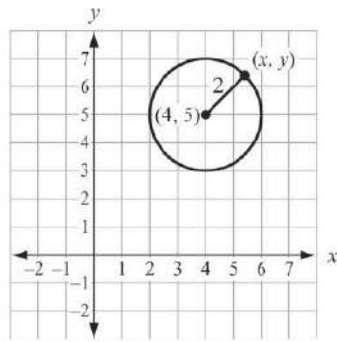


Analytic Geometry Milestone Review Questions

Name: _____

1. What is the equation of the circle with a center at $(4, 5)$ and a radius of 2 ?



2. What is the center and radius of the circle given by $8x^2 + 8y^2 - 16x - 32y + 24 = 0$?
3. Circle C has a center of $(-2, 3)$ and a radius of 4. Does point $(-4, 6)$ lie on circle C ?
4. Circle C has a diameter of 10 and a center at $(2, 2)$. Point A is located at $(-1, 6)$ and point B is located at $(5, -2)$. Is segment AB a diameter of the circle?
5. This is a hand drawing of a mountain. Explain which geometric shape could be used to estimate the total amount of Earth the mountain is made of.



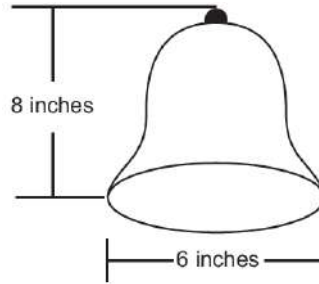
6. A construction company is preparing 10 acres of land for a new housing community. The land contains large rocks that need to be removed. A machine removes 10 rocks from 360 square feet of land. About how many rocks will need to be removed from the 10 acres of land?

1 acre = 43,560 square feet

Analytic Geometry Milestone Review Questions

Name: _____

7. A company needs to package this bell in a rectangular box. What are the smallest dimensions (length, width, and height) the rectangular box can have so that the lid of the box can also close?



Unit 7: Applications of Probability

1. This table shows the names of students in Mr. Leary's class who do or do not own bicycles and skateboards.

Bicycle and Skateboard Ownership			
Owns a Bicycle	Owns a Skateboard	Owns a Bicycle AND Skateboard	Does NOT Own a Bicycle OR Skateboard
Ryan	Brett	Joe	Amy
Sarah	Juan	Mike	Gabe
Mariko	Tobi	Linda	Abi
Nina		Rose	
Dion			

Let set A be the names of students who own bicycles, and let set B be the names of students who own skateboards.

- Find A and B . What does the set represent?
 - Find A or B . What does the set represent?
 - Find $(A \text{ and } B)'$. What does the set represent?
2. In a certain town, the probability that a person plays sports is 65%. The probability that a person is between the ages of 12 and 18 is 40%. The probability that a person plays sports and is between the ages of 12 and 18 is 25%. Are the events independent? How do you know?
3. A random survey was conducted to gather information about age and employment status. This table shows the data that were collected.

Employment Survey Results

Employment Status	Age (in Years)		Total
	Less than 18	18 or greater	
Has Job	20	587	607
Does Not Have Job	245	92	337
Total	265	679	944

- What is the probability that a randomly selected person surveyed has a job, given that the person is less than 18 years old?

Analytic Geometry Milestone Review Questions

Name: _____

- b. What is the probability that a randomly selected person surveyed has a job, given that the person is greater than or equal to 18 years old?
 - c. Are having a job (A) and being 18 or greater (B) independent events? Explain.
 - $P(A)$ = has a job
 - $P(A')$ = does not have a job
 - $P(B)$ = 18 years old or greater
 - $P(B')$ = less than 18 years old
4. In Mr. Mabry's class, there are 12 boys and 16 girls. On Monday, 4 boys and 5 girls were wearing white shirts.
 - a. If a student is chosen at random from Mr. Mabry's class, what is the probability of choosing a boy or a student wearing a white shirt?
 - b. If a student is chosen at random from Mr. Mabry's class, what is the probability of choosing a girl or a student not wearing a white shirt?
5. Terry has a number cube with sides labeled 1 through 6. He rolls the number cube twice.
 - a. What is the probability that the sum of the two rolls is a prime number, given that at least one of the rolls is a 3?
 - b. What is the probability that the sum of the two rolls is a prime number or at least one of the rolls is a 3?