Counting Problem

Alan, Bianca, and Charles are counting in turn. Alan says "one," Bianca says "two," and Charles says "three." Then it's Alan's turn again and he says "four." If the pattern continues, who will say "fifty-nine"?

What's My Age Problem?

Samantha's age is half of Juan's age. Paul's age is half of Samantha's age. If Paul is eight years old, how old is Juan?

Juice Problem

Daria, Evan, and Fernando went to the cafeteria and each ordered a drink. Daria did not order lemonade. Evan ordered cranberry juice. If their order was for lemonade, cranberry juice and orange juice, what did each person order?

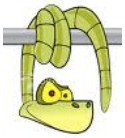
Security Guard Problem

The security guard can choose from three different shirts and two different pairs of pants for his uniform. How many different combinations does he have to choose from?

Some problems adapted from Palette of Problems from Mathematics Teaching in the Middle School

Snake Problem

Matthew is at a zoo. He takes a picture of a one-meter snake beside a brick wall. When he developed his pictures, the one-meter snake is 2cm long and the wall is 4.5cm high. What was the actual height of the brick wall in cm?

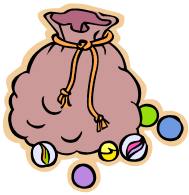


Directionally Challenged Problem

Mr. Roberts faced west. He walked ten steps forward. Then, without turning, he took five sideways steps to his right. Then, he took seven steps backward. Then, he turned left and walked six steps forward. Then, he turned right and took three steps backward. Which direction is Mr. Roberts facing, and how far is he from where he started?

Bag of Marbles Problem

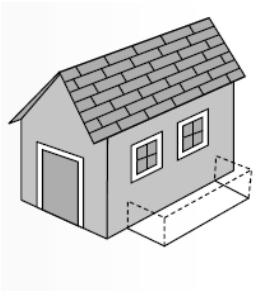
A bag contains red, blue, and yellow marbles. The ratio of red to blue to yellow marbles is 3:5:7. If there are 75 marbles, how many of each color are in the bag?



What's My Number Problem

A number is divided by 2 and then added to 11. The result is 19. What is the original number?

Some problems adapted from Palette of Problems from Mathematics Teaching in the Middle School



Garden Problem

Sergio used 20 yards of fence to enclose a rectangular garden on the side of his house. He used the wall of his house for one side of the garden. He wanted the rectangle to have the greatest possible area. Find the dimensions and the area of Sergio's garden.

Hexa's Counting Problem

The first four numbers Hexa said were 16, 32, 48, and 64. If she keeps counting this way, what is the 99^{th} number Hexa will say?

Recycling Problem

Our school wants to join a recycling organization. For every 1 pound of recycling material, the company will pay the school 5 cents. However, it charges a $10 membership fee per month. In 1 month, how many pounds does the school need to collect to have a profit of at least $15?

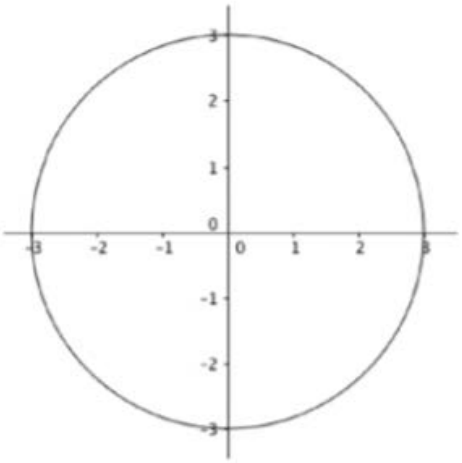
Circle Problem

There are three circles:
A = the largest
B = the middle sized one
C = the smallest
Circle A has a diameter of 20cm. The smaller circles are drawn so that the radius of Circle A is the diameter of Circle B, and the radius of circle B is the diameter of Circle C. What is the area of circle C?

Some problems adapted from Palette of Problems from Mathematics Teaching in the Middle School

A Bug's Life

A bug starts at (3, 0) and crawls counterclockwise around this circle. It takes the bug 24 seconds to crawl around the circle 1 time. Where is the bug after 5 minutes? Explain.



Bugging Out

A bug is crawling across my graph paper in a straight line. When I first notice it, the bug is at the location (–3, –4). Five seconds later, it is at the location (1, 1). Assuming that the bug crawls at a constant rate, what are the coordinates of the point where the bug is located after 1 minute? Explain.

Two-mile Race

In a two-mile race, Ed can beat Faith by 1/5 of a mile. In a two-mile race, Faith can beat Matt by 1/10 of a mile. If Ed and Matt were to have a two-mile race, by how much would Ed win? Explain.