

1. Give analysis of the following:

- i. 

```
num1 = 16
num2 = -12
sum = num1 + num2
print sum
```
- ii. 

```
length = 5
width = 11
area = length * width
print area
```

2. Give analysis which will calculate the diameter, area, and circumference of a circle with the radius of 4.25. Use the following equations (assuming pi = 3.14159):

```
diameter = 2 * radius
area = pi * radius * radius
circumference = 2 * pi * radius
```

3. Answer the following questions:

- i. Susan wants to put wallpaper on four walls of her room. What are the three things you would like to know before you can calculate the cost?
- ii. Assuming 1% of your income is spent on school supplies. Give analysis which will create two variables to store the amount you are paid and another to calculate the amount which is spent on school supplies.

4. You have decided to enter a model boat race. You put your boat at the start line next to your best friend Jill's boat. Create an analysis which will read the speed your boat travels in (feet per minute), the speed that Jill's boat travels and the number of minutes in the race. Print out the distance that both of your boats traveled.

*Distance = speed \* time*

5. Give analysis which calculate the amount obtained by investing the principal P for N years at the rate of R. The following formula is used for the conversion:

$$A = P * (1 + R) ^ N$$