-1) Is your name on the test?

0) What powers a modern submarine while it's underwater?

1) Suppose you run the four lines of graphics code below. What will you see?

```
g.setColor(Color.red);
g.drawFilledRect(50,50,10,10);
g.setColor(Color.black);
g.drawFilledRect(10,10,100,100);
```

1.A small red filled rectangle on top of a large black rectangle.
2.A large black filled rectangle. The red rectangle is erased.
3.Two rectangles that overlap on their corners.
4.Two rectangles that overlap producing a striped pattern.
(JAIL CLOTHES!!)

2) How many lines does this code draw? _____

```
for(double j = 100; j < 102; j += 0.5) {
      g.drawLine(1,1,j,j);
}
```

3) Write me one line of code that uses the method fred to draw a fred on the screen at (100,200) with size of 300. PLEASE BE CAREFUL!!

```
public void fred(int size, int x, int y, Graphics g)
{
    ….
}
```

4) Here is a for loop. Write the same thing using a while loop.

```
for(int i = 1; i < 200; i = i + 12)
{
   g.drawString("Anyone can buy a submarine", 20, 10*i);
}
```

5) Write me an if statement. Fill in the blank below so that the text is printed only if the variable 'age' is between 13 and 19 inclusive. In other words, only if the captain is a teenager.

```
if
(_____________________________________________________________)
{
     g.drawString("The Captain is a teenager", 100, 200);
}
```

6) What is the first part of your find-the-bunny program to run?

1. The constructor.
2. The paint procedure.
3. The mousePressed.
4. None of the above!

7) Finish the program at http://euclid.nmu.edu/~rappleto/it.java.

8) What does this code print?

```
int depth = 100;
int torpedoes = 6;
if (depth > 500 && torpedoes > 0)
    System.out.println("Too deep to fire torpedoes");
else if (torpedoes == 0)
    System.out.println("Out of Torpedoes");
else if (depth < 500)
    System.out.println("Might be found by enemy sonar");
else if (depth < 500 && torpedoes > 0)
    System.out.println("Can shoot torpedoes at enemy");
else
   System.out.println("You should run away");
```

8) Make me method that returns three times it's argument. For example, if I call triple(3.0) it should return a 9.0, and if I call triple(0.1) it should return a 0.3.

9) How many times does this code print "Submarines are all wet"?

```
 for(int a = 1; a < 10; a++)
  {
      for(int b = 3; b > 0; b = b -1)
      {
           System.out.println("Submarines are all wet");
      }
   }
```

10) You are making a program to help decide if your captain is the one for you. In this program, you click on yes/no buttons to answer various questions, and at the end you discover if you should move on, or keep the one you're with. The program works perfectly. But late at night one of your crewmates removes the line 'repaint()' from the method 'mousePressed(mouseEvent me)'. When you go to run the program the next morning, what do you notice?

1. Everything works fine
2. The program won't compile
3. The program fails as it begins to run
4. The program dies half-way through running
5. All the colors are wrong, but everything else is OK
6. The program seems to ignore your mouse clicks

WRITE ME CODE. SHOW IT RUNNING ON THE COMPUTER

Chose any **eight** points of the programs below. Do them. Show me. Live a happy life!

a) Make a loop that prints 147 ... 171 by threes (1 point).
b) Draws the hard shape shown on the board (2 points).
c) Draws anything where you click the mouse (2 points).
d) Prints "Going Up" when you press the 'u' key, and "Going Down" when you press the 'd' key. (3 points)
e) Waits for you to type a letter. It draws that letter at least ten times. (3 points)
f) Like 'e' above, but it FILLS the screen with that letter (1 more, 4 total)
g) Draws 30 rectangles, one inside the other. You must use a loop (4 points).
h) Tells you how far you have clicked from (0,0). (4 points)
i) Computes 1/2 + 1/3 + 1/4 + 1/5 + 1/6 ... 1/100. You MUST use a loop. Hint: Use doubles and decimal points. (4 points)
j) Draws 100 random sized squares in random places using random numbers and a loop. (5 points)
k) The screen gets darker when you press the down arrow, and lighter when you press the up arrow (6 points).