

Static Members Worksheet

Objectives

- Static Members

Concept Question:

1.

Consider the following class declaration:

```
public class Thing
{
    private int x;
    private int y;
    private static int z = 0;

    public Thing()
    {
        x = z;
        y = z;
    }
    static void putThing(int a)
    {
        z = a;
    }
}
```

Assume a program containing the class declaration defines three Thing objects with the following statements:

```
Thing one = new Thing();
Thing two = new Thing();
Thing three = new Thing();
```

- How many separate instances of the x member exist?
- How many separate instances of the y member exist?
- How many separate instances of the z member exist?
- What value will be stored in the x and y members of each object?
- Write a statement that will call the putThing method.

2.

- a. Describe one thing you cannot do with a static method.
- b. Why are static methods useful in creating utility classes?
- c. Describe the difference in the way variables and class objects are passed as arguments to a method.