

Exercise Solutions:

1) For the following values, what data type does a variable need to be in order to store them?

`true` boolean `color(0,0,255)` color
`42` int or float `2.71` float

2) Write out a Processing statement below to declare and initialize a variable that holds our course number (120). Make sure that you give it an *intuitive* and *legal* variable name.

One example: `int classNum = 120;`

3) Describe what will be drawn when the following Processing program is run:

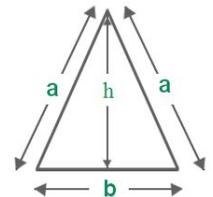
```
int i = 10;
int j = i * 3/2;
color c = color(255,0,0);
i = i + j;
fill(c);
noStroke();
rect(i, j, 30, 30);
```

A 30x30 red square with top-left corner at (25, 15) and no outline.

4) Complete the program below that draws an isosceles triangle with the top point at (`topX`, `topY`) no matter what we initialize the following variables to (*note that declaring multiple variables on one line, as shown here, does work as long as they are the same data type*):

```
int h = 60, b = 60;
int topX = 100, topY = 100;
```

```
triangle(topX, topY, topX - b / 2, topY + h, topX + b / 2, topY + h);
```



5) Complete the commands described below for `float x` and `float y` using the `min()` and `max()` functions.

```
// increases x in increments of 2, but stops at 120
```

```
x = min(x + 2, 120) _____;
```

```
// decreases y in increments of 3.5, but stops at -1
```

```
y = max(y - 3.5, -1) _____;
```

6) Go to the course website and get started on the homework titled “Lego Family.” [*individual*]