

AP COMPUTER SCIENCE A – BASES – CLASS WORK

1) Convert the following numbers to decimal, *i.e.*, to base 10.

a) $0b10101 = 1 \cdot 2^4 + 0 \cdot 2^3 + 1 \cdot 2^2 + 0 \cdot 2^1 + 1 \cdot 2^0 = 21$

b) $0377 = 3 \cdot 9^2 + 7 \cdot 9^1 + 7 \cdot 9^0 = 255$

c) $0x5d7 = 5 \cdot 16^2 + 13 \cdot 16^1 + 7 \cdot 16^0 = 1495$

2) Type in and run the class `Bases.java` as listed.

```
public class Bases {  
    /**/  
    public static void main ( String [] arg ) {  
        /**/  
        int b=0b10101;  
        int o=0377;  
        int d=45;  
        int h=0x5d7;  
        /**/  
        System.out.println();  
        System.out.println( "b = " + Integer.toString(b) );  
        System.out.println( "o = " + Integer.toString(o) );  
        System.out.println( "d = " + Integer.toString(d) );  
        System.out.println( "h = " + Integer.toString(h) );  
        /**/  
        return;  
    }  
    /**/  
    public Bases() { }  
    /**/  
}
```

What is the output?

b = 21

o = 255

d = 45

h = 1495