

BE1200 – Fall 2008

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Quiz # 3 (20 minutes. Closed book & notes)

1.

```
1  task main()
2  {
3      int x;
4      SetSensor(SENSOR_1, SENSOR_TOUCH);
5      OnFwd(OUT_A + OUT_C);
6      until(SENSOR_1 == 1);
7      if(Random(3) == 0)
8      {
9          Off(OUT_A + OUT_C);
10     }
11     else
12     {
13         OnRev(OUT_A + OUT_C);
14         Wait(100);
15         Off(OUT_A + OUT_C);
16     }
17 }
```

2.

(6 beams x 6 units per beam) + (4 plates x 2 units per plate) = 44 units high

AD:  $44^2 + 5^2 = 1961$       AD = 44.28 units

AC: $44^2 + 10^2 = 2036$ AC = 45.12 units
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AB:  $44^2 + 15^2 = 2161$       AB = 46.48 units

AC will be a good fit because it is very close to a multiple of 5