

### 1. Expected Value

1.  $E(x) = -0.033$

2.  $r > 2.4c$

### 2. Expected Value

1.  $P(5) = P(10) = \dots = 0.05$

2.  $E(x) = 52.5$

3.  $\sigma = 28.83$

4.  $P(x = 0) = \frac{1}{5}$

### 3. Binomial Random Variable

1.  $E(x) = 32$

2.  $\sigma = 4.66$

3. Between 22 and 42.

6. 0.05585

### 4. Poisson Random Variable

1. 4

3. 0.2381

4. 0.0183

5. 0.3712

6. 0

### 5. Train Delays

From 6 onwards.

### 6. Website Visits

1. 0.00004206

2. 179

### 7. Tracking Missiles

2.  $P(x = 15) = 0.17$

3.  $P(x \geq 15) = 0.80$

4. 16