

# DATA ANALYTICS WITH R, EXCEL AND TABLAEU

## ASSIGNMENT 8.3 ANSWERS

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**Question no:**

**5)**

**1a)** Find the probability that X is equal to 17.

```
> dbinom(17, size = 31, prob = 0.447)
```

```
[1] 0.07532248
```

**1b).** Find the probability that X is at most 13.

```
> pbinom(13, size = 31, prob = 0.447)
```

```
[1] 0.451357
```

**1c).** Find the probability that X is bigger than 11.

```
> pbinom(11, size = 31, prob = 0.447, lower.tail = FALSE)
```

```
[1] 0.8020339
```

**1d).** Find the probability that X is at least 15.

```
> pbinom(14, size = 31, prob = 0.447, lower.tail = FALSE)
```

```
[1] 0.406024
```

**1e).** Find the probability that X is between 16 and 19, inclusive.

```
> sum(dbinom(16:19, size = 31, prob = 0.447))
```

```
[1] 0.2544758
```

```
> diff(pbinom(c(19, 15), size = 31, prob = 0.447, lower.tail = FALSE))
```

```
[1] 0.2544758
```