Aliza Tariq (2023-ag-10041) 4th Semester BSCS (E3) Stat-402

Minitab Project Report:

12/05/2025 2:37:00 am

Welcome to Minitab, press F1 for help.

Q1: Probability Density Function

```
Binomial with n = 3 and p = 0.2 \times P(X = x) 0 0.512
```

Q2: Cumulative Distribution Function

```
Binomial with n = 10 and p = 0.05 x P(X \le x) 0.913862
```

Q3: Data Display

K4 0.682560

Q4: Cumulative Distribution Function

```
Binomial with n = 15 and p = 0.2 \times P( X \leq x ) 4 0.835766
```

Q5: Data Display

K6 0.0188378

Q6: Data Display

Q7: Data Display

K10 0.120874

Q8: Data Display

K12 1.00000

Q9: Data Display

K14 0.736069

Q10: Data Display

K15 0.617217

Q11: Data Display

K16 0.0115036

Q12: Data Display

K18 0.851968

Q13: Probability Density Function

```
Binomial with n = 8 and p = 0.6

x P(X = x)

6 0.209019
```

Q14: Probability Density Function

```
Binomial with n = 5 and p = 0.999 \times P( X = x ) 0.995010
```

Q15: Data Display

K20 0.559507

Q16: Data Display

K22 0.221199

Q17: Data Display

K23 0.606531

Q18: a) Data Display

K23 0.606531

b) Data Display

K25 0.999966

c)Data Display

K27 0.992368

Data Display

K28 0.984794

Q19: Data Display

K30 0.0487404

Q20: Data Display

K32 0.848796

Q21: Data Display

K34 0.559507

Q22: a) Probability Density Function

Geometric with p = 0.8

```
x P( X = x )

4 0.0064

* NOTE * X = \text{total number of trials.}
```

b) Cumulative Distribution Function

```
Poisson with mean = 0.8 x P(X \le x) 4 0.998589
```

c) Data Display

K36 0.00800000

Q22: a) Data Display

к38 0.972000

b) Data Display

K39 20.0000

Q23: a) Probability Density Function

```
Geometric with p = 0.02   x \quad P(X = x)  10 0.0166750  * \text{NOTE } * X = \text{total number of trials.}
```

b) Data Display

K41 0.903921

c) Data Display

K42 50.0000

Q24: a) Probability Density Function

```
Negative binomial with p = 0.2 and r = 2 \times P( X = x ) 10 0.0603980 \times NOTE * X = total number of trials.
```

b) Data Display

K49 0.180800

c)Data Display

K50 15.0000

Q25: a) Data Display

K52 0.954225

b) Data Display

K54 0.516670

Q26: Data Display

K56 0.00546726

Q27: a) Data Display

K58 0.667180

b) Data Display

K60 0.778926

Q28: a) Probability Density Function

```
Binomial with n = 20 and p = 0.05 \times P( X = x ) \times 0.0595821
```

b) Data Display

K62 0.985981

Q29:a) Data Display

```
K63 3.00000
```

b) Data Display

```
K64 12.0000
```

Q30: Data Display

```
K66 0.127521
```

Q31: a) Data Display

```
K68 0.00546726
```

b) Probability Density Function

```
Negative binomial with p = 0.05 and r = 3 \times P( X = x ) 10 0.0031425 \times NOTE * X = total number of trials.
```

Q32: Data Display

```
K71 0.409600
```

Q33: a) Data Display

```
K72 0.111111
```

b) Probability Density Function

```
Binomial with n = 10 and p = 0.9 \times P(X = x) \times 0.193710
```

Q34: Probability Density Function

```
Binomial with n = 10 and p = 0.9 \times P( X = x ) 8 0.193710
```

Q35: a) Data Display

K73 0.0579200

b) Data Display

K75 0.206085

Q36: a) Data Display

K76 0.200000

Data Display

K77 2.21000

b) Data Display

K78 1.82590

c) Data Display

к79 1.35130

d) Data Display

K80 0.100000

e) Data Display

K81 0.900000

f) Data Display

K82 0.810000