بسمه تعالی

نام و نام خانوادگي: احسان عماد مروستی شمارة دانشجويي:87110243 رشته:کامپیوتر

گروه: ............... زيرگروه: ...............تاريخ انجام آزمايش:23/7/87 ساعت : 10-12

استاد راهنما: اقای اسعد زاده





خواسته های بخش اول

خواسته شماره 1: رسم نمودار بر حسب **F** و تعیین شیب و عرض از مبدا

برای محاسبه خواسته ها از روابط زیر استفاده می کنیم

1:

2:

با استفاده از داده های جدول 1 مقادیر F و M مقادیر aوb به دست می آید:

, b= 4.413 g a = 270.8

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| 300 |  |  |  |  |  | *Column1* |  |
| 212 |  |  | بازه زمانی | تعداد |  |  |  |
| 279 |  |  | 170-200 | 5 |  | Mean | 238.65 |
| 215 |  |  | 200-230 | 8 |  | Standard Error | 11.06684831 |
| 237 |  |  | 230-260 | 1 |  | Median | 220.5 |
| 202 |  |  | 260-290 | 5 |  | Mode | 202 |
| 236 |  |  | 290-320 | 0 |  | Standard Deviation | 49.49245025 |
| 197 |  |  | 320-350 | 1 |  | Sample Variance | 2449.502632 |
| 289 |  |  | 350-380 | 0 |  | Kurtosis | 4.199514999 |
| 214 |  |  | 380-410 | 0 |  | Skewness | 1.935049269 |
| 209 |  |  | 410-440 | 0 |  | Range | 199 |
| 196 |  |  | 440-470 | 0 |  | Minimum | 196 |
| 226 |  |  |  |  |  | Maximum | 395 |
| 209 |  |  |  |  |  | Sum | 4773 |
| 206 |  |  |  |  |  | Count | 20 |
| 230 |  |  |  |  |  |  |  |
| 395 |  |  |  |  |  |  |  |
| 227 |  |  |  |  |  |  |  |
| 202 |  |  |  |  |  |  |  |
| 292 |  |  |  |  |  |  |  |

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| 215 |  |  |  |  |  | *Column1* |  |
| 277 |  |  | بازه زمانی | تعداد |  |  |  |
| 260 |  |  | 170-200 | 2 |  | Mean | 220.3684211 |
| 211 |  |  | 200-230 | 10 |  | Standard Error | 7.880396332 |
| 266 |  |  | 230-260 | 3 |  | Median | 211 |
| 200 |  |  | 260-290 | 2 |  | Mode | 215 |
| 278 |  |  | 290-320 | 2 |  | Standard Deviation | 34.34985125 |
| 200 |  |  | 320-350 | 0 |  | Sample Variance | 1179.912281 |
| 270 |  |  | 350-380 | 0 |  | Kurtosis | -1.073529947 |
| 201 |  |  | 380-410 | 1 |  | Skewness | 0.608900956 |
| 199 |  |  | 410-440 | 0 |  | #REF! | 103 |
| 211 |  |  | 440-470 | 0 |  | Minimum | 175 |
| 183 |  |  |  |  |  | Maximum | 278 |
| 180 |  |  |  |  |  | Sum | 4187 |
| 208 |  |  |  |  |  | Count | 19 |
| 246 |  |  |  |  |  |  |  |
| 175 |  |  |  |  |  |  |  |
| 215 |  |  |  |  |  |  |  |
| 192 |  |  |  |  |  |  |  |

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| 300 |  |  |  |  |  | *Column1* |  |
| 212 |  |  | بازه زمانی | تعداد |  |  |  |
| 279 |  |  | 170-200 | 7 |  | Mean | 232.35 |
| 215 |  |  | 200-230 | 18 |  | Standard Error | 7.233872425 |
| 237 |  |  | 230-260 | 4 |  | Median | 214.5 |
| 202 |  |  | 260-290 | 7 |  | Mode | 215 |
| 236 |  |  | 290-320 | 2 |  | Standard Deviation | 45.75102633 |
| 197 |  |  | 320-350 | 1 |  | Sample Variance | 2093.15641 |
| 289 |  |  | 350-380 | 0 |  | Kurtosis | 2.94077709 |
| 214 |  |  | 380-410 | 1 |  | Skewness | 1.563612324 |
| 209 |  |  | 410-440 | 0 |  | #REF! | 220 |
| 196 |  |  | 440-470 | 0 |  | Minimum | 175 |
| 226 |  |  |  |  |  | Maximum | 395 |
| 209 |  |  |  |  |  | Sum | 9294 |
| 206 |  |  |  |  |  | Count | 40 |
| 230 |  |  |  |  |  |  |  |
| 395 |  |  |  |  |  |  |  |
| 227 | |  | | --- | |  | |  |  |  |  |  |  |
| 202 |  |  |  |  |  |  |  |
| 292 |  |  |  |  |  |  |  |
| 215 |  |  |  |  |  |  |  |
| 277 |  |  |  |  |  |  |  |
| 260 |  |  |  |  |  |  |  |
| 211 |  |  |  |  |  |  |  |
| 266 |  |  |  |  |  |  |  |
| 200 |  |  |  |  |  |  |  |
| 278 |  |  |  |  |  |  |  |
| 200 |  |  |  |  |  |  |  |
| 270 |  |  |  |  |  |  |  |
| 201 |  |  |  |  |  |  |  |
| 199 |  |  |  |  |  |  |  |
| 211 |  |  |  |  |  |  |  |
| 183 |  |  |  |  |  |  |  |
| 180 |  |  |  |  |  |  |  |
| 208 |  |  |  |  |  |  |  |
| 246 |  |  |  |  |  |  |  |
| 175 |  |  |  |  |  |  |  |
| 215 |  |  |  |  |  |  |  |
| 192 |  |  |  |  |  |  |  |
| 334 |  |  |  |  |  |  |  |

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| 339 |  |  |  |  |  | *Column1* |  |
| 206 |  |  | بازه زمانی | تعداد |  |  |  |
| 282 |  |  | 170-200 | 7 |  | Mean | 233.7 |
| 210 |  |  | 200-230 | 3 |  | Standard Error | 10.58477059 |
| 195 |  |  | 230-260 | 4 |  | Median | 221 |
| 205 |  |  | 260-290 | 4 |  | Mode | 232 |
| 277 |  |  | 290-320 | 0 |  | Standard Deviation | 47.33653313 |
| 194 |  |  | 320-350 | 2 |  | Sample Variance | 2240.747368 |
| 178 |  |  | 350-380 | 0 |  | Kurtosis | -0.205652554 |
| 232 |  |  | 380-410 | 0 |  | Skewness | 0.7848805 |
| 232 |  |  | 410-440 | 0 |  | Range | 165 |
| 322 |  |  | 440-470 | 0 |  | Minimum | 174 |
| 198 |  |  |  |  |  | Maximum | 339 |
| 253 |  |  |  |  |  | Sum | 4674 |
| 191 |  |  |  |  |  | Count | 20 |
| 249 |  |  |  |  |  |  |  |
| 174 |  |  |  |  |  |  |  |
| 198 |  |  |  |  |  |  |  |
| 265 |  |  |  |  |  |  |  |
| 274 |  |  |  |  |  |  |  |
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| 186 | |  | | |  | | |  | | |  | | |  | | | *Column1* | | |  | | |
| 180 | |  | | |  | | | بازه زمانی | | | تعداد | | |  | | |  | | |  | | |
| 224 | |  | | |  | | | 170-200 | | | 5 | | |  | | | Mean | | | 232.15 | | |
| 292 | |  | | |  | | | 200-230 | | | 8 | | |  | | | Standard Error | | | 11.5200683 | | |
| 196 | |  | | |  | | | 230-260 | | | 4 | | |  | | | Median | | | 223 | | |
| 251 | |  | | |  | | | 260-290 | | | 0 | | |  | | | Mode | | | 209 | | |
| 170 | |  | | |  | | | 290-320 | | | 1 | | |  | | | Standard Deviation | | | 51.51931166 | | |
| 209 | |  | | |  | | | 320-350 | | | 1 | | |  | | | Sample Variance | | | 2654.239474 | | |
| 227 | |  | | |  | | | 350-380 | | | 0 | | |  | | | Kurtosis | | | 3.34355345 | | |
| 204 | |  | | |  | | | 380-410 | | | 1 | | |  | | | Skewness | | | 1.741751947 | | |
| 229 | |  | | |  | | | 410-440 | | | 0 | | |  | | | Range | | | 214 | | |
| 209 | |  | | |  | | | 440-470 | | | 0 | | |  | | | Minimum | | | 170 | | |
| 384 | |  | | |  | | |  | | |  | | |  | | | Maximum | | | 384 | | |
| 235 | |  | | |  | | |  | | |  | | |  | | | Sum | | | 4643 | | |
| 235 | |  | | |  | | |  | | |  | | |  | | | Count | | | 20 | | |
| 245 | |  | | |  | | |  | | |  | | |  | | |  | | |  | | |
| 222 | |  | | |  | | |  | | |  | | |  | | |  | | |  | | |
| 215 | |  | | |  | | |  | | |  | | |  | | |  | | |  | | |
| 331 | |  | | |  | | |  | | |  | | |  | | |  | | |  | | |
| 199 | |  | | |  | | |  | | |  | | |  | | |  | | |  | | |
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| 339 |  | | |  | | |  | | |  | | |  | | | *Column1* | | |  | | |  | |
| 206 |  | | |  | | | بازه زمانی | | | تعداد | | |  | | |  | | |  | | |  | |
| 282 |  | | |  | | | 170-200 | | | 12 | | |  | | | Mean | | | 232.925 | | |  | |
| 210 |  | | |  | | | 200-230 | | | 11 | | |  | | | Standard Error | | | 7.722294356 | | |  | |
| 195 |  | | |  | | | 230-260 | | | 8 | | |  | | | Median | | | 223 | | |  | |
| 205 |  | | |  | | | 260-290 | | | 4 | | |  | | | Mode | | | 232 | | |  | |
| 277 |  | | |  | | | 290-320 | | | 1 | | |  | | | Standard Deviation | | | 48.84007786 | | |  | |
| 194 |  | | |  | | | 320-350 | | | 3 | | |  | | | Sample Variance | | | 2385.353205 | | |  | |
| 178 |  | | |  | | | 350-380 | | | 0 | | |  | | | Kurtosis | | | 1.459345021 | | |  | |
| 232 |  | | |  | | | 380-410 | | | 1 | | |  | | | Skewness | | | 1.269156787 | | |  | |
| 232 |  | | |  | | | 410-440 | | | 0 | | |  | | | Range | | | 214 | | |  | |
| 322 |  | | |  | | | 440-470 | | | 0 | | |  | | | Minimum | | | 170 | | |  | |
| 198 |  | | |  | | |  | | |  | | |  | | | Maximum | | | 384 | | |  | |
| 253 |  | | |  | | |  | | |  | | |  | | | Sum | | | 9317 | | |  | |
| 191 |  | | |  | | |  | | |  | | |  | | | Count | | | 40 | | |  | |
| 249 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 174 | |  | | --- | |  | | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 198 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 265 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 274 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 186 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 180 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 224 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 292 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 196 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 251 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 170 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 209 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 227 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 204 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 229 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 209 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 384 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 235 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 235 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 245 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 222 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 215 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 331 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
| 199 |  | | |  | | |  | | |  | | |  | | |  | | |  | | |  | |
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| 258 |  | |  | | |  | | |  | | |  | | | *Column1* | | |  | | |
| 306 |  | |  | | | بازه زمانی | | | تعداد | | |  | | |  | | |  | | |
| 270 |  | |  | | | 170-200 | | | 2 | | |  | | | Mean | | | 272.95 | | |
| 329 |  | |  | | | 200-230 | | | 2 | | |  | | | Standard Error | | | 11.79283346 | | |
| 274 |  | |  | | | 230-260 | | | 4 | | |  | | | Median | | | 271 | | |
| 282 |  | |  | | | 260-290 | | | 6 | | |  | | | Mode | | | #N/A | | |
| 402 | Bn | |  | | | 290-320 | | | 3 | | |  | | | Standard Deviation | | | 52.73915453 | | |
| 272 |  | |  | | | 320-350 | | | 1 | | |  | | | Sample Variance | | | 2781.418421 | | |
| 361 |  | |  | | | 350-380 | | | 1 | | |  | | | Kurtosis | | | 0.827697951 | | |
| 260 |  | |  | | | 380-410 | | | 1 | | |  | | | Skewness | | | 0.632824271 | | |
| 185 |  | |  | | | 410-440 | | | 0 | | |  | | | Range | | | 217 | | |
| 199 |  | |  | | | 440-470 | | | 0 | | |  | | | Minimum | | | 185 | | |
| 244 |  | |  | | |  | | |  | | |  | | | Maximum | | | 402 | | |
| 255 |  | |  | | |  | | |  | | |  | | | Sum | | | 5459 | | |
| 206 |  | |  | | |  | | |  | | |  | | | Count | | | 20 | | |
| 249 |  | |  | | |  | | |  | | |  | | |  | | |  | | |
| 291 |  | |  | | |  | | |  | | |  | | |  | | |  | | |
| 226 | |  | | --- | |  | | |  | | |  | | |  | | |  | | |  | | |  | | |
| 315 |  | |  | | |  | | |  | | |  | | |  | | |  | | |
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