1)

The table below displays a week's worth of data on daily sales at the Crank It Louder Music Store.

Over that time period, what was the mean daily level of sales?



* A  $3,489.79
* b  $4,071.42
* c  $1,643.23

 d $2,829.92

2)

The table below displays a week's worth of data on daily sales at the Crank It Louder Music Store.   Over that time period, what was the median daily level of sales?



* a  $1,643.23
* b  $3,489.79
* c  $3,130.46

 d $800.12

3)

The histogram below displays the age distribution of the world's billionaires as reported by Forbes Magazine in 2001.   This distribution is best described as:



* a  Approximately normal.
* B  Strongly skewed to the right.
* C  Bimodal.

 D Approximately uniform.

4)

Which of the following correctly ranks from smallest to largest the measures of central tendency of the data displayed in the histogram below?



* a Mode < mean < median.
* b Median < mode < mean.
* c Mode < median < mean.

 d The answer cannot be determined from the information provided.

5)

The scatter diagram below displays the relationship between age and net worth (in US$ billions) for the world's 20 wealthiest people as reported by Forbes Magazine in 2001.   If 45-year old Bill Gates, the world's wealthiest person, is considered an outlier and removed from the data set, what will be the effect on this relationship?



* a The value of the correlation coefficient will decrease.
* b The value of the correlation coefficient will increase.
* C  The value of the correlation coefficient will stay about the same.

 D The correlation will become perfectly linear.

6)

The data in the Excel spreadsheet linked below gives the net worth (in US$ billions) and ages of the world's billionaires as reported by Forbes Magazine in 2001.   The correlation coefficient between age and net worth:

* a  Is about 0.00.
* b  Is greater than 0.5.
* c  Is less than -0.5.

 d The answer cannot be determined from the information given.

|  |  |  |
| --- | --- | --- |
| **Rank** |  **Net Worth (in $billions)**  |  **Age (in years)**  |
| 1 | 58.70  |  45  |
| 2 | 32.30  |  70  |
| 3 | 30.40  |  48  |
| 4 | 26.00  |  56  |
| 5 | 20.00  |  44  |
| 6 | 18.80  |  53  |
| 7 | 18.70  |  55  |
| 8 | 18.60  |  57  |
| 9 | 18.50  |  52  |
| 10 | 18.50  |  81  |
| 11 | 17.80  |  74  |
| 12 | 16.60  |  45  |
| 13 | 16.40  |  77  |
| 14 | 15.60  |  75  |
| 15 | 15.30  |  61  |
| 16 | 13.00  |  75  |
| 17 | 12.60  |  73  |
| 18 | 12.60  |  78  |
| 19 | 12.00  |  74  |
| 20 | 11.70  |  77  |
| 21 | 11.70  |  81  |
| 22 | 10.90  |  86  |
| 23 | 10.80  |  61  |
| 24 | 10.70  |  52  |
| 25 | 10.50  |  35  |
| 26 | 10.50  |  36  |
| 27 | 10.30  |  64  |
| 28 | 9.10  |  39  |
| 29 | 9.00  |  69  |
| 30 | 9.00  |  61  |
| 31 | 9.00  |  65  |
| 32 | 9.00  |  48  |
| 33 | 8.80  |  48  |
| 34 | 8.80  |  62  |
| 35 | 8.30  |  71  |
| 36 | 8.00  |  82  |
| 37 | 7.80  |  70  |
| 38 | 7.70  |  75  |
| 39 | 7.70  |  55  |
| 40 | 6.90  |  55  |
| 41 | 6.60  |  66  |
| 42 | 6.60  |  65  |
| 43 | 6.50  |  49  |
| 44 | 6.40  |  84  |
| 45 | 6.30  |  64  |
| 46 | 6.30  |  64  |
| 47 | 6.10  |  53  |
| 48 | 6.00  |  58  |
| 49 | 6.00  |  70  |
| 50 | 5.90  |  73  |
| 51 | 5.80  |  68  |
| 52 | 5.70  |  58  |
| 53 | 5.60  |  61  |
| 54 | 5.60  |  43  |
| 55 | 5.50  |  66  |
| 56 | 5.50  |  75  |
| 57 | 5.50  |  51  |
| 58 | 5.40  |  75  |
| 59 | 5.40  |  66  |
| 60 | 5.40  |  72  |
| 61 | 5.40  |  57  |
| 62 | 5.30  |  56  |
| 63 | 5.30  |  74  |
| 64 | 5.30  |  90  |
| 65 | 5.30  |  53  |
| 66 | 5.20  |  53  |
| 67 | 5.10  |  68  |
| 68 | 5.00  |  71  |
| 69 | 5.00  |  73  |
| 70 | 5.00  |  58  |
| 72 | 5.00  |  71  |
| 73 | 4.90  |  76  |
| 74 | 4.80  |  60  |
| 75 | 4.80  |  52  |
| 76 | 4.70  |  46  |
| 77 | 4.60  |  71  |
| 78 | 4.60  |  54  |
| 79 | 4.60  |  59  |
| 80 | 4.50  |  58  |
| 81 | 4.50  |  75  |
| 82 | 4.50  |  77  |
| 83 | 4.50  |  73  |
| 84 | 4.50  |  35  |
| 85 | 4.50  |  80  |
| 86 | 4.50  |  44  |
| 87 | 4.50  |  56  |
| 89 | 4.40  |  84  |
| 90 | 4.30  |  45  |
| 91 | 4.30  |  76  |
| 92 | 4.30  |  63  |
| 93 | 4.20  |  76  |
| 94 | 4.10  |  52  |
| 95 | 4.10  |  50  |
| 96 | 4.00  |  92  |
| 97 | 4.00  |  69  |
| 98 | 4.00  |  68  |
| 99 | 4.00  |  77  |
| 100 | 4.00  |  57  |
| 101 | 4.00  |  60  |
| 102 | 3.80  |  58  |
| 103 | 3.80  |  64  |
| 104 | 3.80  |  68  |
| 105 | 3.80  |  71  |
| 106 | 3.80  |  76  |
| 107 | 3.70  |  43  |
| 108 | 3.70  |  65  |
| 109 | 3.70  |  47  |
| 110 | 3.70  |  78  |
| 111 | 3.70  |  44  |
| 112 | 3.60  |  92  |
| 113 | 3.50  |  72  |
| 114 | 3.50  |  51  |
| 115 | 3.50  |  72  |
| 116 | 3.50  |  58  |
| 117 | 3.50  |  68  |
| 118 | 3.50  |  53  |
| 119 | 3.50  |  66  |
| 120 | 3.40  |  68  |
| 121 | 3.40  |  70  |
| 122 | 3.40  |  58  |
| 123 | 3.40  |  51  |
| 124 | 3.40  |  69  |
| 125 | 3.40  |  79  |
| 126 | 3.30  |  72  |
| 127 | 3.30  |  55  |
| 128 | 3.30  |  64  |
| 129 | 3.30  |  59  |
| 130 | 3.30  |  74  |
| 131 | 3.30  |  71  |
| 132 | 3.30  |  64  |
| 133 | 3.30  |  58  |
| 134 | 3.20  |  72  |
| 135 | 3.20  |  70  |
| 136 | 3.20  |  65  |
| 137 | 3.20  |  77  |
| 138 | 3.20  |  65  |
| 139 | 3.20  |  61  |
| 140 | 3.20  |  57  |
| 141 | 3.20  |  75  |
| 142 | 3.10  |  80  |
| 143 | 3.10  |  57  |
| 144 | 3.10  |  76  |
| 145 | 3.10  |  61  |
| 146 | 3.10  |  38  |
| 147 | 3.00  |  33  |
| 148 | 3.00  |  53  |
| 149 | 3.00  |  49  |
| 150 | 3.00  |  76  |
| 151 | 3.00  |  82  |
| 152 | 3.00  |  60  |
| 153 | 3.00  |  84  |
| 154 | 3.00  |  57  |
| 155 | 3.00  |  70  |
| 156 | 3.00  |  45  |
| 157 | 2.90  |  61  |
| 158 | 2.90  |  63  |
| 159 | 2.90  |  73  |
| 160 | 2.90  |  57  |
| 161 | 2.80  |  74  |
| 162 | 2.80  |  80  |
| 163 | 2.80  |  64  |
| 164 | 2.80  |  53  |
| 165 | 2.80  |  78  |
| 166 | 2.80  |  67  |
| 167 | 2.80  |  55  |
| 168 | 2.70  |  75  |
| 169 | 2.70  |  83  |
| 170 | 2.70  |  68  |
| 171 | 2.70  |  36  |
| 172 | 2.70  |  84  |
| 173 | 2.60  |  75  |
| 174 | 2.60  |  55  |
| 175 | 2.60  |  60  |
| 176 | 2.50  |  77  |
| 177 | 2.50  |  70  |
| 178 | 2.50  |  78  |
| 179 | 2.50  |  71  |
| 180 | 2.50  |  70  |
| 181 | 2.50  |  72  |
| 182 | 2.50  |  60  |
| 183 | 2.50  |  63  |
| 184 | 2.50  |  86  |
| 185 | 2.50  |  47  |
| 186 | 2.50  |  56  |
| 187 | 2.40  |  38  |
| 188 | 2.40  |  42  |
| 189 | 2.40  |  63  |
| 190 | 2.40  |  78  |
| 191 | 2.30  |  73  |
| 192 | 2.30  |  49  |
| 193 | 2.30  |  68  |
| 194 | 2.30  |  78  |
| 195 | 2.30  |  65  |
| 196 | 2.30  |  58  |
| 197 | 2.30  |  58  |
| 198 | 2.30  |  61  |
| 199 | 2.30  |  46  |
| 200 | 2.30  |  60  |
| 201 | 2.20  |  63  |
| 202 | 2.20  |  60  |
| 203 | 2.20  |  62  |
| 204 | 2.20  |  65  |
| 205 | 2.20  |  64  |
| 206 | 2.20  |  65  |
| 207 | 2.20  |  49  |
| 208 | 2.20  |  70  |
| 209 | 2.20  |  87  |
| 210 | 2.20  |  55  |
| 211 | 2.20  |  59  |
| 212 | 2.20  |  48  |
| 213 | 2.20  |  54  |
| 214 | 2.10  |  81  |
| 215 | 2.10  |  57  |
| 216 | 2.10  |  52  |
| 217 | 2.10  |  68  |
| 218 | 2.10  |  87  |
| 219 | 2.10  |  73  |
| 220 | 2.10  |  66  |
| 221 | 2.10  |  54  |
| 222 | 2.10  |  85  |
| 223 | 2.10  |  70  |
| 224 | 2.00  |  37  |
| 225 | 2.00  |  61  |
| 226 | 2.00  |  83  |
| 227 | 2.00  |  65  |
| 228 | 2.00  |  82  |
| 229 | 2.00  |  58  |
| 230 | 2.00  |  34  |
| 231 | 2.00  |  87  |
| 232 | 2.00  |  63  |
| 233 | 2.00  |  61  |
| 234 | 2.00  |  67  |
| 235 | 2.00  |  79  |
| 236 | 2.00  |  37  |
| 237 | 2.00  |  72  |
| 238 | 2.00  |  51  |
| 239 | 2.00  |  38  |
| 240 | 2.00  |  53  |
| 241 | 1.90  |  47  |
| 242 | 1.90  |  54  |
| 243 | 1.90  |  58  |
| 244 | 1.90  |  63  |
| 245 | 1.90  |  46  |
| 246 | 1.90  |  57  |
| 247 | 1.90  |  81  |
| 248 | 1.90  |  67  |
| 249 | 1.90  |  47  |
| 250 | 1.90  |  53  |
| 251 | 1.90  |  58  |
| 252 | 1.90  |  64  |
| 253 | 1.90  |  46  |
| 254 | 1.90  |  49  |
| 255 | 1.90  |  63  |
| 256 | 1.90  |  72  |
| 257 | 1.90  |  57  |
| 258 | 1.90  |  40  |
| 259 | 1.90  |  60  |
| 260 | 1.90  |  59  |
| 261 | 1.80  |  77  |
| 262 | 1.80  |  61  |
| 263 | 1.80  |  38  |
| 264 | 1.80  |  75  |
| 265 | 1.80  |  65  |
| 266 | 1.80  |  50  |
| 267 | 1.80  |  48  |
| 268 | 1.80  |  62  |
| 269 | 1.80  |  66  |
| 270 | 1.80  |  40  |
| 271 | 1.80  |  59  |
| 272 | 1.80  |  81  |
| 273 | 1.80  |  72  |
| 274 | 1.80  |  67  |
| 275 | 1.80  |  68  |
| 276 | 1.80  |  51  |
| 277 | 1.80  |  51  |
| 278 | 1.80  |  85  |
| 279 | 1.80  |  40  |
| 280 | 1.70  |  66  |
| 281 | 1.70  |  63  |
| 282 | 1.70  |  34  |
| 283 | 1.70  |  74  |
| 284 | 1.70  |  65  |
| 285 | 1.70  |  53  |
| 286 | 1.70  |  71  |
| 287 | 1.70  |  52  |
| 288 | 1.70  |  61  |
| 289 | 1.70  |  41  |
| 290 | 1.70  |  60  |
| 291 | 1.70  |  46  |
| 292 | 1.70  |  42  |
| 293 | 1.70  |  69  |
| 294 | 1.70  |  60  |
| 295 | 1.70  |  66  |
| 296 | 1.70  |  88  |
| 297 | 1.70  |  70  |
| 298 | 1.70  |  69  |
| 299 | 1.70  |  55  |
| 300 | 1.60  |  55  |
| 301 | 1.60  |  86  |
| 302 | 1.60  |  63  |
| 303 | 1.60  |  50  |
| 304 | 1.60  |  78  |
| 305 | 1.60  |  75  |
| 306 | 1.60  |  64  |
| 307 | 1.60  |  62  |
| 308 | 1.60  |  74  |
| 309 | 1.60  |  68  |
| 310 | 1.60  |  55  |
| 311 | 1.60  |  60  |
| 312 | 1.60  |  59  |
| 313 | 1.60  |  47  |
| 314 | 1.60  |  66  |
| 315 | 1.60  |  82  |
| 316 | 1.60  |  45  |
| 317 | 1.60  |  56  |
| 318 | 1.60  |  79  |
| 319 | 1.60  |  34  |
| 320 | 1.60  |  77  |
| 321 | 1.60  |  66  |
| 322 | 1.60  |  66  |
| 323 | 1.60  |  68  |
| 324 | 1.50  |  69  |
| 325 | 1.50  |  74  |
| 326 | 1.50  |  64  |
| 327 | 1.50  |  77  |
| 328 | 1.50  |  60  |
| 329 | 1.50  |  54  |
| 330 | 1.50  |  81  |
| 331 | 1.50  |  34  |
| 332 | 1.50  |  56  |
| 333 | 1.50  |  57  |
| 334 | 1.50  |  49  |
| 335 | 1.50  |  96  |
| 336 | 1.50  |  62  |
| 337 | 1.50  |  35  |
| 338 | 1.50  |  47  |
| 339 | 1.50  |  44  |
| 340 | 1.50  |  49  |
| 341 | 1.50  |  56  |
| 342 | 1.50  |  91  |
| 343 | 1.50  |  68  |
| 344 | 1.50  |  70  |
| 345 | 1.50  |  62  |
| 346 | 1.50  |  65  |
| 347 | 1.50  |  53  |
| 348 | 1.50  |  66  |
| 349 | 1.50  |  53  |
| 350 | 1.40  |  34  |
| 351 | 1.40  |  71  |
| 352 | 1.40  |  78  |
| 353 | 1.40  |  66  |
| 354 | 1.40  |  43  |
| 355 | 1.40  |  42  |
| 356 | 1.40  |  49  |
| 357 | 1.40  |  62  |
| 358 | 1.40  |  76  |
| 359 | 1.40  |  62  |
| 360 | 1.40  |  55  |
| 361 | 1.40  |  59  |
| 362 | 1.40  |  44  |
| 363 | 1.40  |  54  |
| 364 | 1.40  |  58  |
| 365 | 1.40  |  67  |
| 366 | 1.40  |  64  |
| 367 | 1.40  |  64  |
| 368 | 1.40  |  62  |
| 369 | 1.40  |  80  |
| 370 | 1.40  |  77  |
| 371 | 1.40  |  41  |
| 372 | 1.30  |  89  |
| 373 | 1.30  |  51  |
| 374 | 1.30  |  55  |
| 375 | 1.30  |  66  |
| 376 | 1.30  |  67  |
| 377 | 1.30  |  57  |
| 378 | 1.30  |  61  |
| 379 | 1.30  |  59  |
| 380 | 1.30  |  68  |
| 381 | 1.30  |  46  |
| 382 | 1.30  |  42  |
| 383 | 1.30  |  65  |
| 384 | 1.30  |  69  |
| 385 | 1.30  |  74  |
| 386 | 1.30  |  62  |
| 387 | 1.30  |  55  |
| 388 | 1.30  |  63  |
| 389 | 1.30  |  37  |
| 390 | 1.30  |  82  |
| 391 | 1.30  |  54  |
| 392 | 1.30  |  76  |
| 393 | 1.30  |  66  |
| 394 | 1.30  |  51  |
| 395 | 1.30  |  77  |
| 396 | 1.30  |  56  |
| 397 | 1.30  |  53  |
| 398 | 1.30  |  42  |
| 399 | 1.30  |  37  |
| 400 | 1.30  |  69  |
| 401 | 1.30  |  76  |
| 402 | 1.30  |  62  |
| 403 | 1.30  |  59  |
| 404 | 1.20  |  56  |
| 405 | 1.20  |  58  |
| 406 | 1.20  |  62  |
| 407 | 1.20  |  72  |
| 408 | 1.20  |  48  |
| 409 | 1.20  |  56  |
| 410 | 1.20  |  78  |
| 411 | 1.20  |  75  |
| 412 | 1.20  |  62  |
| 413 | 1.20  |  64  |
| 414 | 1.20  |  76  |
| 415 | 1.20  |  71  |
| 416 | 1.20  |  69  |
| 417 | 1.20  |  63  |
| 418 | 1.20  |  60  |
| 419 | 1.20  |  65  |
| 420 | 1.20  |  66  |
| 421 | 1.20  |  42  |
| 422 | 1.20  |  53  |
| 423 | 1.20  |  68  |
| 424 | 1.20  |  51  |
| 425 | 1.20  |  72  |
| 426 | 1.20  |  44  |
| 427 | 1.20  |  66  |
| 428 | 1.20  |  29  |
| 429 | 1.20  |  37  |
| 430 | 1.20  |  33  |
| 431 | 1.20  |  42  |
| 432 | 1.20  |  64  |
| 433 | 1.10  |  63  |
| 434 | 1.10  |  72  |
| 435 | 1.10  |  58  |
| 436 | 1.10  |  63  |
| 437 | 1.10  |  69  |
| 438 | 1.10  |  74  |
| 439 | 1.10  |  75  |
| 440 | 1.10  |  71  |
| 441 | 1.10  |  68  |
| 442 | 1.10  |  78  |
| 443 | 1.10  |  56  |
| 444 | 1.10  |  53  |
| 445 | 1.10  |  58  |
| 446 | 1.10  |  79  |
| 447 | 1.10  |  72  |
| 448 | 1.10  |  60  |
| 449 | 1.10  |  52  |
| 450 | 1.10  |  73  |
| 451 | 1.10  |  54  |
| 452 | 1.10  |  50  |
| 453 | 1.10  |  47  |
| 454 | 1.10  |  64  |
| 455 | 1.10  |  78  |
| 456 | 1.10  |  80  |
| 457 | 1.10  |  47  |
| 458 | 1.10  |  53  |
| 459 | 1.10  |  60  |
| 460 | 1.10  |  59  |
| 461 | 1.10  |  75  |
| 462 | 1.10  |  68  |
| 463 | 1.10  |  64  |
| 464 | 1.10  |  70  |
| 465 | 1.10  |  46  |
| 466 | 1.10  |  84  |
| 467 | 1.10  |  33  |
| 468 | 1.10  |  58  |
| 469 | 1.10  |  55  |
| 470 | 1.00  |  67  |
| 471 | 1.00  |  63  |
| 472 | 1.00  |  64  |
| 473 | 1.00  |  64  |
| 474 | 1.00  |  66  |
| 475 | 1.00  |  41  |
| 476 | 1.00  |  59  |
| 477 | 1.00  |  42  |
| 478 | 1.00  |  50  |
| 479 | 1.00  |  66  |
| 480 | 1.00  |  35  |
| 481 | 1.00  |  56  |
| 482 | 1.00  |  68  |
| 483 | 1.00  |  75  |
| 484 | 1.00  |  36  |
| 485 | 1.00  |  65  |
| 486 | 1.00  |  72  |
| 487 | 1.00  |  51  |
| 488 | 1.00  |  58  |
| 489 | 1.00  |  46  |
| 490 | 1.00  |  75  |
| 491 | 1.00  |  48  |
| 492 | 1.00  |  50  |
| 493 | 1.00  |  55  |
| 494 | 1.00  |  43  |
| 495 | 1.00  |  63  |
| 496 | 1.00  |  47  |
| 497 | 1.00  |  73  |
| 498 | 1.00  |  50  |
| 499 | 1.00  |  48  |
| 500 | 1.00  |  95  |
| 501 | 1.00  |  69  |
| 502 | 1.00  |  71  |
| 503 | 1.00  |  65  |
| 504 | 1.00  |  53  |
| 505 | 1.00  |  58  |
| 506 | 1.00  |  73  |
| 507 | 1.00  |  73  |
| 508 | 1.00  |  67  |
| 509 | 1.00  |  47  |
| 510 | 1.00  |  72  |
| 511 | 1.00  |  78  |
| 512 | 1.00  |  32  |
| 513 | 1.00  |  79  |
| 514 | 1.00  |  37  |
|  |  |  |

8)

The data in the Excel spreadsheet linked below gives the average monthly price of gold (in dollars per ounce) for the years 1980 to 1983.   In which of the years was the coefficient of variation of gold price the highest?

* a 1980
* b 1981
* c 1982

 d 1983

|  |  |
| --- | --- |
|  | **Price of Gold (in $ per ounce)** |
| Month | 1980 | 1981 | 1982 | 1983 |
| Jan |  675.30  |  557.38  |  384.38  |  481.29  |
| Feb |  665.32  |  499.76  |  374.13  |  491.96  |
| Mar |  553.58  |  498.76  |  330.04  |  419.70  |
| Apr |  517.41  |  495.80  |  350.34  |  432.93  |
| May |  513.82  |  479.69  |  333.82  |  438.08  |
| Jun |  600.71  |  464.76  |  314.98  |  412.84  |
| Jul |  644.28  |  409.28  |  338.97  |  422.72  |
| Aug |  627.14  |  410.15  |  364.23  |  416.24  |
| Sep |  673.62  |  443.58  |  435.76  |  411.80  |
| Oct |  661.14  |  437.75  |  422.15  |  393.58  |
| Nov |  623.46  |  413.36  |  414.91  |  381.66  |
| Dec |  594.92  |  410.09  |  444.30  |  389.36  |

10)

A researcher wants to collect data about the study habits of sophomores at Harmond University. From the sophomore class of 2,300 students, she wants to collect a sample of 70 students.   Which of the following sampling methods will yield the most representative sample?

* a Assigning each sophomore a number and then randomly generating 70 numbers from that list.
* B  Randomly selecting 70 sophomores entering the university's main library on a randomly selected evening.
* C  Selecting the 70 sophomores whose grade point averages (GPA) fall closest to the mean GPA of the sophomore class.

 d  Randomly selecting 70 sophomores who are members of college fraternities.

11)

A normal distribution is completely determined by:

* a Its mean and its standard deviation.
* B  Its mean and its mode.
* C  Its mean and its median.

 D  None of the above.

**14.**

14)

When calculating a confidence interval for a mean, which of the following will increase the width of the confidence interval?

* A  Decreasing the sample size.
* B  Increasing the sample size.
* c Decreasing the sample mean.

 D Increasing the sample mean.

15)

A manufacturer of microwaves gathers information on microwave sales from a random sample of 50 stores in a large retail chain. In the sample, the mean number of microwaves sold per store last week was 19, with standard deviation 2.   What is the 95% confidence interval for the mean number of microwaves sold at a retail store in the chain last week?

* a [18.45, 19.55]
* b  [17.00, 21.00]
* c  [15.00, 23.00]

 d  [18.27, 19.73]

**16.**

16)

In a public opinion poll, 48% of 189 respondents favored an elimination of taxes on dividend income.   What is the 95% confidence interval for the proportion of people who favor an elimination of taxes on dividend income?

* A  [40.9%, 55.1%]
* b  [47.5%, 48.5%]
* c  [42.0%, 54.0%]

 d The answer cannot be determined from the information provided.

17)

In a public opinion poll, 48% of 189 respondents favor an elimination of taxes on dividend income.   How many respondents would be needed to calculate a 95% confidence interval (for the proportion of people who favor an elimination of taxes on dividend income) that has a total width no greater than 4% (i.e., the estimate must be within +/- 2% of the true population proportion)?

* a 2,398
* b  600
* c  1,689

 d The answer cannot be determined from the information provided.

18)

in a finance course at a business school, 6 students are randomly selected. Their mean score on the final exam is 75, with standard deviation 8.   What is the 95% confidence interval for the average class score on the final?

* A  [66.6, 83.4]
* b [67.6, 82.4]
* c  [68.6, 81.4]

 d [71.7, 78.3]

19)

A company's average accounts receivable per customer is $132.54. After a problem in the automated accounting software is suspected, a random sample of 38 accounts reveals a sample mean of $143.55 and a sample standard deviation of $38.29.   In a two-sided hypothesis test to see if the average accounts receivable has changed, the best formulation of the null hypothesis is:

* a The average accounts receivable is $132.54.
* b  The average accounts receivable is $143.55.
* c The average accounts receivable is no longer $132.54.

 d  None of the above.

**20.**

20)

A company's average accounts receivable per customer is $132.54. After a problem in the automated accounting software is suspected, a random sample of 38 accounts reveals a sample mean of $143.55 and a sample standard deviation of $38.29.   After running a two-sided hypothesis test of the hypothesis that the average accounts receivable has changed, the best conclusion (using a 95% confidence level) is:

* a  There is not sufficient evidence that the average accounts receivable has changed.
* b The average accounts receivable is still $132.54.
* c  The average accounts receivable has changed.

 D  The average accounts receivable is at least $143.55.

28)

The regression analysis below relates US annual energy consumption in trillions of BTUs to the independent variables "US Gross Domestic Product (GDP) in trillions of dollars" and "average gas mileage of all passenger cars in miles per gallon (mpg)."   Which of the two independent variables is significant at the 0.01 level?



* a  GDP only.
* B  Average car gas mileage only.
* C  Both independent variables.

 D  Neither independent variable.

**29.**

29)

The regression analysis below relates US annual energy consumption in trillions of BTUs to the independent variables "US Gross Domestic Product (GDP) in trillions of dollars" and "average gas mileage of all passenger cars in miles per gallon (mpg)."   The coefficient for the independent variable "average car gas mileage (mpg)," -70.50, describes:



* a  The relationship between energy consumption and average car gas mileage, controlling for GDP.
* B  The relationship between energy consumption and average car gas mileage, not controlling for GDP.
* c The relationship between average car gas mileage and GDP, controlling for energy consumption.

 D The relationship between average car gas mileage and GDP, not controlling for energy consumption.

38)

The table below displays data on defect rates at a compact disk (CD) pressing facility. The table includes data on the distribution of CDs that have content errors (missing and/or wrong content), and on the distribution of CDs that have labeling errors.   Which of the following statements is true?



*
* a  The fact that a CD has a content error tells us nothing about whether it has a labeling error.
* b  The events of a CD having a content error and a CD having a labeling error are statistically dependent.
* c  The fact that a CD has a labeling error tells us something about whether it has a content error.

 d  None of the above.

**40.**

40)

The WH meat-packing company must decide whether or not to recall one week's production of kielbasa due to possible contamination. An outbreak of non-fatal food poisoning may be linked to WH. If so, WH may face a lawsuit. The tree below summarizes the decision.   The EMV of the cost of **not** issuing a recall is $80,000. Based on EMV, WH should not issue a recall. If WH chooses to recall, which of the following best describes the WH's attitude towards this decision?



* a Risk averse.
* b Risk neutral.
* c Risk seeking

  d Chicken.

41)

The WH meat-packing company must decide whether or not to recall one week's production of kielbasa due to possible contamination. An outbreak of non-fatal food poisoning may be linked to WH. If so, WH may face a lawsuit. The tree below summarizes the decision.   The EMV of the cost of **not** issuing a recall is $80,000. Based on EMV, WH should not issue a recall. An estimated value of a reputation loss is included in the outcome estimate of the lawsuit. If WH is implicated, the firm may face a reputation loss even if no lawsuit is filed. For what values of that reputation loss would issuing the recall be preferable, in terms of EMV?



* a  Higher than $500,000.
* B  Lower than $500,000.
* C  Lower than $44,444

 D None of the above.

42)

The WH meat-packing company must decide whether or not to recall one week's production of kielbasa due to possible contamination. An outbreak of non-fatal food poisoning may be linked to WH. If so, WH may face a lawsuit. The tree below summarizes the decision.   The EMV of the cost of **not** issuing a recall is $80,000. Based on EMV, the manager should not issue the recall. For what values of **p** = Prob[WH is implicated] is not recalling the kielbasa preferable to recalling the kielbasa, in terms of EMV?



* a  p < 15%
* b  p > 15%
* c  p < 85%

 d  None of the above.

 **43.**

43)

The WH meat-packing company must decide whether or not to recall one week's production of kielbasa due to possible contamination. An outbreak of non-fatal food poisoning may be linked to WH. If so, WH may face a lawsuit. The tree below summarizes the decision.   The EMV of the cost of **not** issuing a recall is $80,000. Suppose there were a way to know for certain whether WH would be implicated or not. What would be the value of this perfect information?



* a $68,000
* b  $12,000
* c  $80,000
* d None of the above.