**Problem:**

When performing time study process insurance claims adjusting company doctors Triple R, Barney Rubble analyst applies the continuous method for time recording. The activity is divided into four work items. In Figure 7.3 are the rating factors (RF) performance and the times recorded by the continuous method, r for each work item:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Fig 7.3** | | | | | | | | | |
| Top of Form  **Process: Processing for an insurance claim**  Bottom of Form | | | | **DATE: 05/05/05** | | | **Observer: Pedro**  **Pica Piedra** | | |
| Work Item |  | **Observations** | | | | | **t** | **RF** | **ð** |
| **1** | **2** | **3** | **4** | **5** |
| Top of Form  Verify that forms are completed and signed  Bottom of Form | t | 0.50 | 0.55 | 0.45 | 0.60 | 0.50 | 0.52 | 1.1 | 0.5070 |
| r | 0.50 | 3.30 | 5.70 | 8.20 | 10.85 |  |  |  |
| Write the amount of the claim, review the calculations | t | 0.20 | 0.15 | 0.25 | 0.35 | 0.25 | 0.24 | 1.20 | 0.0742 |
| r | 0.70 | 3.45 | 5.95 | 8.55 | 11.10 |  |  |  |
| Determine the proportion of claims will be denied | t | 0.75 | 0.60 | 0.55 | 0.70 | 0.65 | 0.65 | 1.20 | 0.0791 |
| r | 1.45 | 4.05 | 6.50 | 9.25 | 11.75 |  |  |  |
| Generate the letter form, enter the data for the check | t | 1.30 | 1.20 | 1.10 | 1.10 | 1.30 | 1.20 | 0.9 | 0.1000 |
| r | 2.75 | 5.25 | 7.60 | 10.35 | 13.05 |  |  |  |

1-Calculate the normal time required for this activity

2- Calculate the standard time for this activity, assuming that tolerance is 20% of the normal time

3- What is the appropriate sample size to estimate the time corresponding to element 2 within ±10% of the true mean with 95% confidence?