

b. To demonstrate various levels of performance to a group of union steward the Attainment Company is using the metronome while dealing card hands for 100% is 104 bpm. How many times per minute should the metronome following levels of performance: 60 percent, 75 percent, 100 percent, 125 percent

- i. 60 percent = $0.60 \times 104 \text{ beats} = 62 \text{ beats/min}$
- ii. 75 percent = $0.75 \times 104 \text{ beats} = \underline{78} \text{ beats/min}$
- iii. 100 percent = $\underline{1} \times \underline{104} \text{ beats} = \underline{104} \text{ beats/min}$
- iv. 125 percent = $\underline{1.25} \times \underline{104} \text{ beats} = \underline{130} \text{ beats/min}$

c. Rate the overall study for each of the following jobs shown by the instructor

- i. Stamping extrusions $\Rightarrow$ Level of Performance 90%
- ii. Stamping end couplings $\Rightarrow$ Level of Performance 105%
- iii. Flashlight assembly $\Rightarrow$ Level of Performance 110%

percent = $\frac{7}{104} \times 104$ beats = 7 beats/min
 percent = $\frac{1.25}{104} \times 104$ beats = 1.25 beats/min

study for each of the following jobs shown by the instructor via video:

- ing extrusions $\Rightarrow$ Level of Performance 90%
- ing end couplings $\Rightarrow$ Level of Performance 105%
- ht assembly $\Rightarrow$ Level of Performance 110%
- assembly $\Rightarrow$ Level of Performance 80%

} correct
 first

answers with TA/instructor before moving on.

Time Studies

book and other resources to answer those questions.

65%
 60%
 75%
 50%

In groups of 3-4 students deal cards at paces of (comment = what did the pace "feel" like):

- i. 40 bpm; 1 brief comment: Very slow I was not comfortable
- ii. 60 bpm; 1 brief comment: Still very slow dealing
- iii. 80 bpm; 1 brief comment: It's still slow but a not as slow the first time
- iv. 90 bpm; 1 brief comment: It feels way better than the first 3 It's a normal pace.
- v. 104 bpm; 1 brief comment: It's good but I feel I still can deal faster a bit
- vi. 150 bpm; 1 brief comment: This my speed I feel this fit me good
- vii. 170 bpm; 1 brief comment: If felt good and natural.
- viii. 190 bpm; 1 brief comment: This really faster than I thought

To demonstrate various levels of performance to a group of union stewards, the time study supervisor of the Attainment Company is using the metronome while dealing card hands. Assume level of performance for 100% is 104 bpm. How many times per minute should the metronome beat to demonstrate the following levels of performance: 60 percent, 75 percent, 100 percent, 125 percent?

- i. 60 percent = 0.60×104 beats = 62 beats/min
- ii. 75 percent = 0.75×104 beats = 78 beats/min
- iii. 100 percent = 1×104 beats = 104 beats/min
- iv. 125 percent = 1.25×104 beats = 130 beats/min

pace, who is cooperative, dependable and conscientious. The operator attitude to the work measurement procedure and should have an open method improvement.

- A qualified operator is one who can achieve the established standard following the prescribed method at an average pace.
- The operator should be rated in order to adjust the time of a good operator to the time of a poor operator down to the standard.

Analyst Responsibilities During a Time Study

Summarize 3 key responsibilities 1-2 sentences each:

- Responsibility 1: *Honestly Evaluate the operator.*
- Responsibility 2: *Account Time study*
- Responsibility 3: *IT should be an honest judgement.*

Supervisor and Union's Responsibilities

Summarize 3 key responsibilities 1-2 sentences each:

- Responsibility 1: *a proper method establishment.*
- Responsibility 2: *The supervisor should notify her or his that they would be studied.*
- Responsibility 3: *Analyst can't expect to know every thing*

d. Time Study Script

Write a short script and practice twice for how you will approach an operator and discuss your time study. How can you quickly convey information and develop rapport with an operator?

****conduct script with instructor/TA (acting as an operator) for approval before moving on.**