KEY TERMS

SLACK	Slack is the amount of time that a task can be delayed without delaying either the next activity or the whole project.
FLOAT	Float is a synonym for slack.
FREE SLACK	Free slack refers to the amount of time, typically the number of days, that a task can be delayed without affecting the task that comes next.
TOTAL SLACK	Total slack is the total amount of time a task can be delayed without jeopardizing the completion date of the overall project.
BUFFER/ CONTINGENCY TIME	Buffer or contingency time refers to periods of inactive time the project manager inserts into the schedule in order to decrease the risk of delays.
CRITICAL PATH	Critical path activities cannot be delayed without delaying the entire project. For critical path tasks, slack time is zero.
PERT	PERT, which stands for Program Evaluation Review Technique, is a formula for calculating the weighted average of optimistic, pessimistic, and most likely time forecasts.
IDLE TIME	Idle time occurs when an employee or machine is unproductive but shouldn't be.
LAG	Lag is the waiting time between two tasks.
LEAD	Lead is the amount of time a dependent task can be moved up in a schedule.

FORMULA FOR SLACK TIME

The key values in the slack time formula are **latest start time (LST)**, or the last date work on the task can begin without causing a delay, and **earliest start time (EST)**, or the first date when work can begin. This formula calculates **slack time (ST)**.

$$LST-EST = ST$$

An alternative expression of the slack time formula uses **earliest finish time (EFT)** and **latest finish time (LFT)** and yields the same results.

PERT FORMULA

Optimistic time (OT) is the shortest time frame within which the work might be completed, **pessimistic time (PT)** is the longest, and **most likely time (LT)** is a realistic estimate. This formula calculates **expected time (ET)**.

$$[OT + (4 \times LT) + PT] \div 6 = ET$$

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