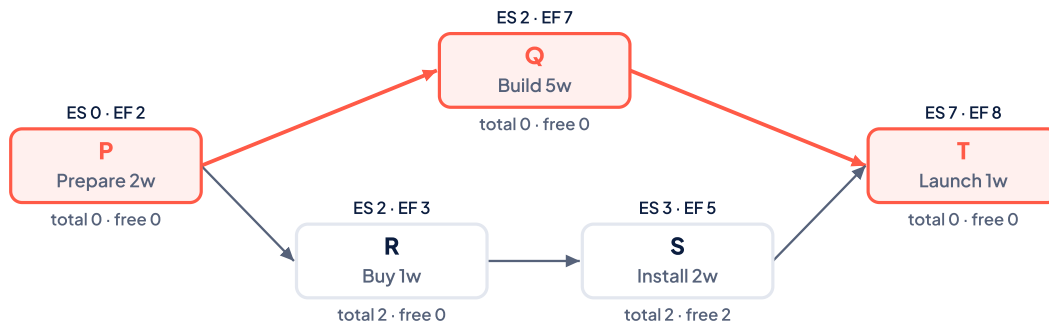


Total float and free float

How long each activity can slip before the end date moves, or before the next activity must wait.



Illustrative, weeks from 0. R and S share 2 weeks of total float. R has no free float: if it slips a week, S starts later, but the end, week 8, holds.

WHAT IT IS

Float comes out of the two passes of the critical path method (Kelley and Walker). **Total float**: how long an activity can slip without moving the end date. **Free float**: how long before any successor must start later. Free float is never larger. It is smaller when activities with float follow each other, because they share one margin. Some scheduling tools say 'slack'.

HOW IT WORKS

- 01 Total float = late start – early start (LS – ES).
- 02 Free float = next early start – own early finish (EF).
- 03 Two in a row share float: a slip moves the next.
- 04 A date imposed too early gives negative float.

MID-LEVEL · WORKED EXAMPLE

Apply it well

The situation: A city team has ten weeks before online parking permits go live. The data migration has one week of total float; the service-desk guide has four.

Equal here, as each feeds a critical activity. Migration: late start 3 – early start 2 = 1 week, and the test starts at 6, a week after it ends at 5. Guide: 6 – 2 = 4. The migration's week stays a buffer for a known data risk.

In the exam: Give both formulas, then the numbers. Say what they mean: who can wait, who cannot, and what you will watch.

SENIOR · WORKED EXAMPLE

Design and lead it

The situation: A city is joining 14 online services under one login over 30 months, with several teams and a platform supplier.

The project manager sets who may spend float: team leads their free float, which delays no one; total float only with approval, as it takes room from other teams. Supplier milestones come before the city's late dates, so a slip shows early.

In the exam: Treat float as a **shared margin**: who may spend it, how contracts protect it, and who decides when it turns negative.

WHERE IT SITS

IPMA · ICB4

4.5.4: a time buffer or float where timing is uncertain (p. 112); 4.5.4.4 (p. 114)

PMI · PMBOK® GUIDE 8 · PMP® EXAM

Guide p. 161: total, free and negative float; near-critical paths. Exam outline: Process task 8

APM · BOK 8 · PMQ EXAM

BoK (APM's Body of Knowledge) glossary: float, total and free; §5.5.1: critical path analysis finds float. PMQ (APM's Project Management Qualification) 20c

Sources: Kelley & Walker (1959); IPMA ICB4 (2015); PMI, PMBOK® Guide, 8th ed.; PMI, PMP® Examination Content Outline (2026); APM Body of Knowledge, 8th ed.; APM, PMQ handbook (v6, 2026)

Key: IPMA = International Project Management Association; ICB4 = IPMA's Individual Competence Baseline (4.5.4 etc.: its competence elements); PMI = Project Management Institute; PMBOK® Guide = PMI's body-of-knowledge guide; PMP® = PMI's Project Management Professional; APM = Association for Project Management. Unofficial study material for IPMA®, PMI® and APM exams. Not affiliated with, endorsed by or approved by IPMA, PMI or APM, and not an accredited or endorsed training provider. IPMA® and IPMA ICB® are registered trademarks of IPMA in Switzerland and other countries. PMI, PMP, CAPM and PMBOK are registered marks of Project Management Institute, Inc. APM is a trade mark of the Association for Project Management. Other marks belong to their owners. PMP® exam facts are from PMI's public PMP® Examination Content Outline (2026); check the current version on pmi.org. APM's qualifications are its own; this series is not an APM Accredited Provider or APM Endorsed. Examples use a fictional city and its projects. Levels (this series' labels): Mid-level = moderately complex projects (IPMA Level C, PMI's PMP®); Senior = complex projects and people (IPMA Level B, APM's Chartered Project Professional).

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