Cumulative GPA: the two formulas and what each future average does

Cumulative = (GPA so far x credits so far + this term's GPA x this term's credits) / total credits. GPA needed over the next N credits to reach a target T = (T x (credits so far + N) - GPA so far x credits so far) / N. Example: 3.40 over 60 credits, then 3.80 over 15: 3.48. To reach 3.60 with 30 more credits from 3.40 over 60: 4.00 needed.

Cumulative GPA after the next credits (future average across the top)

credits to come = a third of credits so far (senior year after three years)

Current GPA	4.0	3.7	3.5	3.3	3.0	2.7	2.5	2.0
2.0	2.50	2.43	2.38	2.32	2.25	2.18	2.12	2.00
2.3	2.72	2.65	2.60	2.55	2.48	2.40	2.35	2.23
2.5	2.88	2.80	2.75	2.70	2.62	2.55	2.50	2.38
2.7	3.02	2.95	2.90	2.85	2.78	2.70	2.65	2.53
3.0	3.25	3.18	3.12	3.07	3.00	2.93	2.88	2.75
3.3	3.47	3.40	3.35	3.30	3.23	3.15	3.10	2.98
3.5	3.62	3.55	3.50	3.45	3.38	3.30	3.25	3.13
3.7	3.77	3.70	3.65	3.60	3.53	3.45	3.40	3.28
3.9	3.93	3.85	3.80	3.75	3.68	3.60	3.55	3.42

credits to come = half of credits so far (junior year after two)

Current GPA	4.0	3.7	3.5	3.3	3.0	2.7	2.5	2.0
2.0	2.67	2.57	2.50	2.43	2.33	2.23	2.17	2.00
2.3	2.87	2.77	2.70	2.63	2.53	2.43	2.37	2.20
2.5	3.00	2.90	2.83	2.77	2.67	2.57	2.50	2.33
2.7	3.13	3.03	2.97	2.90	2.80	2.70	2.63	2.47
3.0	3.33	3.23	3.17	3.10	3.00	2.90	2.83	2.67
3.3	3.53	3.43	3.37	3.30	3.20	3.10	3.03	2.87
3.5	3.67	3.57	3.50	3.43	3.33	3.23	3.17	3.00
3.7	3.80	3.70	3.63	3.57	3.47	3.37	3.30	3.13
3.9	3.93	3.83	3.77	3.70	3.60	3.50	3.43	3.27

credits to come = equal to credits so far (sophomore year)

Current GPA	4.0	3.7	3.5	3.3	3.0	2.7	2.5	2.0
2.0	3.00	2.85	2.75	2.65	2.50	2.35	2.25	2.00
2.3	3.15	3.00	2.90	2.80	2.65	2.50	2.40	2.15
2.5	3.25	3.10	3.00	2.90	2.75	2.60	2.50	2.25
2.7	3.35	3.20	3.10	3.00	2.85	2.70	2.60	2.35
3.0	3.50	3.35	3.25	3.15	3.00	2.85	2.75	2.50
3.3	3.65	3.50	3.40	3.30	3.15	3.00	2.90	2.65
3.5	3.75	3.60	3.50	3.40	3.25	3.10	3.00	2.75
3.7	3.85	3.70	3.60	3.50	3.35	3.20	3.10	2.85
3.9	3.95	3.80	3.70	3.60	3.45	3.30	3.20	2.95

From sciencewithshobha.com/blog/cumulative-gpa-calculator-combine-your-current-gpa-and-credits-with-this-semester-what-gpa-you-need-from-here-to-reach-a-target-and-why-a-gpa-moves-so-slowly-by-senior-year/ · 1-on-1 online maths and science, Grades 6 to 12, free 30-minute first class.

The GPA needed to reach a target, and your plan

GPA needed over the remaining credits (remaining = a third of credits so far)

Current GPA	Target 3.0	Target 3.3	Target 3.5	Target 3.7	Target 3.9
2.5	over 4.0	over 4.0	over 4.0	over 4.0	over 4.0
2.7	3.90	over 4.0	over 4.0	over 4.0	over 4.0
2.9	3.30	over 4.0	over 4.0	over 4.0	over 4.0
3.0	3.00	over 4.0	over 4.0	over 4.0	over 4.0
3.2	2.40	3.60	over 4.0	over 4.0	over 4.0
3.3	2.10	3.30	over 4.0	over 4.0	over 4.0
3.5	1.50	2.70	3.50	over 4.0	over 4.0
3.6	1.20	2.40	3.20	4.00	over 4.0
3.7	0.90	2.10	2.90	3.70	over 4.0
3.8	0.60	1.80	2.60	3.40	over 4.0

The same, with remaining credits equal to credits so far

Current GPA	Target 3.0	Target 3.3	Target 3.5	Target 3.7	Target 3.9
2.0	4.00	over 4.0	over 4.0	over 4.0	over 4.0
2.3	3.70	over 4.0	over 4.0	over 4.0	over 4.0
2.5	3.50	over 4.0	over 4.0	over 4.0	over 4.0
2.7	3.30	3.90	over 4.0	over 4.0	over 4.0
3.0	3.00	3.60	4.00	over 4.0	over 4.0
3.2	2.80	3.40	3.80	over 4.0	over 4.0
3.3	2.70	3.30	3.70	over 4.0	over 4.0
3.5	2.50	3.10	3.50	3.90	over 4.0
3.7	2.30	2.90	3.30	3.70	over 4.0

A semester's weight is its credits over the running total: 100% in the first semester, 25% in the fourth, 12.5% in the eighth. GPAs move fast in freshman year and slowly after.

Your plan

GPA so far, and the credits it covers: _____

This semester's courses and expected grades: _____

Cumulative GPA after this semester (from the calculator): _____

Target, credits still to come, GPA needed from here: _____

If needed is under 4.0: the course list that gets it: _____

If over 4.0: the best reachable GPA, and the target I will set: _____