What you need on the final: the formula and the grid

Needed score on the final = (target - current x (1 - weight)) / weight, with the weight as a decimal. The current grade is the grade before the final, out of 100, with every other category already in it. A perfect final gives current x (1 - weight) + weight x 100, which is the ceiling.

Example: 82% going in, a final worth 25%. For an 85: (85 - 82 x 0.75) / 0.25 = 94.0. For an 80: 74.0. For a 90: 114.0, out of reach; the ceiling is 86.5.

Final worth 20% (the usual semester exam)

Current	For 95	For 90	For 87	For 85	For 83	For 80	For 77	For 75	For 73	For 70	For 65	For 60
98	83.0	58.0	43.0	33.0	23.0	8.0	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)
95	95.0	70.0	55.0	45.0	35.0	20.0	5.0	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)
92	over 100	82.0	67.0	57.0	47.0	32.0	17.0	7.0	0 (safe)	0 (safe)	0 (safe)	0 (safe)
90	over 100	90.0	75.0	65.0	55.0	40.0	25.0	15.0	5.0	0 (safe)	0 (safe)	0 (safe)
88	over 100	98.0	83.0	73.0	63.0	48.0	33.0	23.0	13.0	0 (safe)	0 (safe)	0 (safe)
85	over 100	over 100	95.0	85.0	75.0	60.0	45.0	35.0	25.0	10.0	0 (safe)	0 (safe)
82	over 100	over 100	over 100	97.0	87.0	72.0	57.0	47.0	37.0	22.0	0 (safe)	0 (safe)
80	over 100	over 100	over 100	over 100	95.0	80.0	65.0	55.0	45.0	30.0	5.0	0 (safe)
78	over 100	over 100	over 100	over 100	over 100	88.0	73.0	63.0	53.0	38.0	13.0	0 (safe)
75	over 100	over 100	over 100	over 100	over 100	100.0	85.0	75.0	65.0	50.0	25.0	0.0
72	over 100	over 100	over 100	over 100	over 100	over 100	97.0	87.0	77.0	62.0	37.0	12.0
70	over 100	over 100	over 100	over 100	over 100	over 100	over 100	95.0	85.0	70.0	45.0	20.0
68	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	93.0	78.0	53.0	28.0
65	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	90.0	65.0	40.0
62	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	77.0	52.0
60	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	85.0	60.0
55	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	80.0
50	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	100.0

From sciencewithshobha.com/blog/final-grade-calculator-what-you-need-on-the-final-to-get-the-grade-you-want-the-formula-a-table-for-every-current-grade-and-exam-weight-and-what-to-do-when-the-number-is-over-100/ · 1-on-1 online maths and science, Grades 6 to 12, free 30-minute first class.

The grid for other exam weights, the letter scales and your plan

The score needed for a target, by current grade and exam weight (target 85, then 80, then 90)

Current	85 at 10%	85 at 15%	85 at 25%	85 at 30%	85 at 40%	85 at 50%	80 at 10%	80 at 25%	80 at 40%	90 at 10%	90 at 25%	90 at 40%
95	0 (safe)	28.3	55.0	61.7	70.0	75.0	0 (safe)	35.0	57.5	45.0	75.0	82.5
92	22.0	45.3	64.0	68.7	74.5	78.0	0 (safe)	44.0	62.0	72.0	84.0	87.0
90	40.0	56.7	70.0	73.3	77.5	80.0	0 (safe)	50.0	65.0	90.0	90.0	90.0
88	58.0	68.0	76.0	78.0	80.5	82.0	8.0	56.0	68.0	over 100	96.0	93.0
85	85.0	85.0	85.0	85.0	85.0	85.0	35.0	65.0	72.5	over 100	over 100	97.5
82	over 100	over 100	94.0	92.0	89.5	88.0	62.0	74.0	77.0	over 100	over 100	over 100
80	over 100	over 100	100.0	96.7	92.5	90.0	80.0	80.0	80.0	over 100	over 100	over 100
78	over 100	over 100	over 100	over 100	95.5	92.0	98.0	86.0	83.0	over 100	over 100	over 100
75	over 100	over 100	over 100	over 100	100.0	95.0	over 100	95.0	87.5	over 100	over 100	over 100
72	over 100	over 100	over 100	over 100	over 100	98.0	over 100	over 100	92.0	over 100	over 100	over 100
70	over 100	over 100	over 100	over 100	over 100	100.0	over 100	over 100	95.0	over 100	over 100	over 100
65	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100
60	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100

The letter scales

Percentage	Plus-minus letter	4.0	10-point letter	4.0
97-100	A+	4.0	A	4.0
93-96	A	4.0	A	4.0
90-92	A-	3.7	A	4.0
87-89	B+	3.3	B	3.0
83-86	B	3.0	B	3.0
80-82	B-	2.7	B	3.0
77-79	C+	2.3	C	2.0
73-76	C	2.0	C	2.0
70-72	C-	1.7	C	2.0
67-69	D+	1.3	D	1.0
65-66	D	1.0	D	1.0
60-64	F	0.0	D	1.0
below 60	F	0.0	F	0.0

Plus-minus scale: Buffalo Public Schools. 10-point scale: North Carolina State Board of Education (every NC high school since 2015-16). Your school's handbook has its own table.

Your plan

Course, current grade (before the final), exam weight: _____

Grade I want, and the score the formula says I need: _____

If over 100: the reachable target and its needed score: _____

The two units with the most marks on the final: _____

The weakest recent test, and its missed questions: _____

Study plan for the week (one line a day): _____