Semester grade: the 40/40/20 formula and the exam score needed for every target

Semester = 0.40 x quarter 1 + 0.40 x quarter 2 + 0.20 x exam (Charlotte-Mecklenburg, Howard County MD policy 8020, Chariho RI and most districts). Exam score needed for a target = (target x 100 - 40 x Q1 - 40 x Q2) / 20. Example: quarters 84 and 88, exam 76: 84.00; an 85 needs 81.0 on the exam, a 90 needs 106.0 (impossible).

Exam score needed (40/40/20), by the average of the two quarters

Quarter avg	For 95	For 93	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	73.0	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	85.0	70.0	55.0	45.0	35.0	20.0	5.0	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)
93	over 100	93.0	78.0	63.0	53.0	43.0	28.0	13.0	3.0	0 (safe)	0 (safe)	0 (safe)	0 (safe)
92	over 100	97.0	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	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	over 100	98.0	83.0	73.0	63.0	48.0	33.0	23.0	13.0	0 (safe)	0 (safe)	0 (safe)
87	over 100	over 100	over 100	87.0	77.0	67.0	52.0	37.0	27.0	17.0	2.0	0 (safe)	0 (safe)
85	over 100	over 100	over 100	95.0	85.0	75.0	60.0	45.0	35.0	25.0	10.0	0 (safe)	0 (safe)
83	over 100	over 100	over 100	over 100	93.0	83.0	68.0	53.0	43.0	33.0	18.0	0 (safe)	0 (safe)
82	over 100	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	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	over 100	88.0	73.0	63.0	53.0	38.0	13.0	0 (safe)
77	over 100	over 100	over 100	over 100	over 100	over 100	92.0	77.0	67.0	57.0	42.0	17.0	0 (safe)
75	over 100	over 100	over 100	over 100	over 100	over 100	100.0	85.0	75.0	65.0	50.0	25.0	0.0
73	over 100	over 100	over 100	over 100	over 100	over 100	over 100	93.0	83.0	73.0	58.0	33.0	8.0
72	over 100	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	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	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	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	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	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	over 100	80.0

From sciencewithshobha.com/blog/semester-grade-calculator-two-quarters-and-a-final-exam-the-40-40-20-rule-and-the-other-splits-schools-use-what-you-need-on-the-exam-and-a-quarter-grade-calculator/ · 1-on-1 online maths and science, Grades 6 to 12, free 30-minute first class.

The other splits, the 45/45/10 table, the letter scales and your plan

Split	Where	Formula	What the exam can move
40 / 40 / 20	most districts	0.4 Q1 + 0.4 Q2 + 0.2 exam	a fifth of the gap between exam and quarter average
45 / 45 / 10	some districts, often an option	0.45 Q1 + 0.45 Q2 + 0.1 exam	a tenth of the gap
50 / 50	no exam, or exam-exempt	0.5 Q1 + 0.5 Q2	nothing
80 / 20	one body of work plus exam, or a state EOC test	0.8 work + 0.2 exam	a fifth of the gap

Exam score needed under 45/45/10

Quarter avg	For 95	For 90	For 87	For 85	For 83	For 80	For 77	For 75	For 70	For 65	For 60
95	95.0	45.0	15.0	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)
92	over 100	72.0	42.0	22.0	2.0	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)
90	over 100	90.0	60.0	40.0	20.0	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)
88	over 100	over 100	78.0	58.0	38.0	8.0	0 (safe)	0 (safe)	0 (safe)	0 (safe)	0 (safe)
85	over 100	over 100	over 100	85.0	65.0	35.0	5.0	0 (safe)	0 (safe)	0 (safe)	0 (safe)
82	over 100	over 100	over 100	over 100	92.0	62.0	32.0	12.0	0 (safe)	0 (safe)	0 (safe)
80	over 100	over 100	over 100	over 100	over 100	80.0	50.0	30.0	0 (safe)	0 (safe)	0 (safe)
78	over 100	over 100	over 100	over 100	over 100	98.0	68.0	48.0	0 (safe)	0 (safe)	0 (safe)
75	over 100	over 100	over 100	over 100	over 100	over 100	95.0	75.0	25.0	0 (safe)	0 (safe)
72	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	52.0	2.0	0 (safe)
70	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	70.0	20.0	0 (safe)
65	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	65.0	15.0
60	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	over 100	60.0

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, quarter 1, quarter 2, my district's split: _____

Semester grade if the exam equals my quarter average: _____

Exam score for the next letter up, and for holding the current one: _____

The two units with the most marks on the exam, and the plan: _____