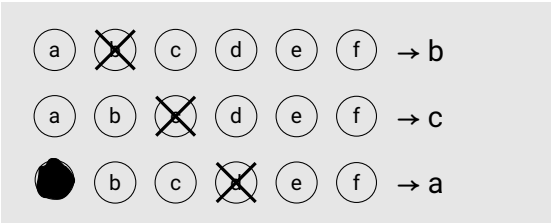
Surname, First name

1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9
0	0	0	0	0	0	0

Structural Mechanics EXAM (CT1000 S)
Prerequisites test 2



Answer multiple-choice questions as shown in the example.

Dear student,

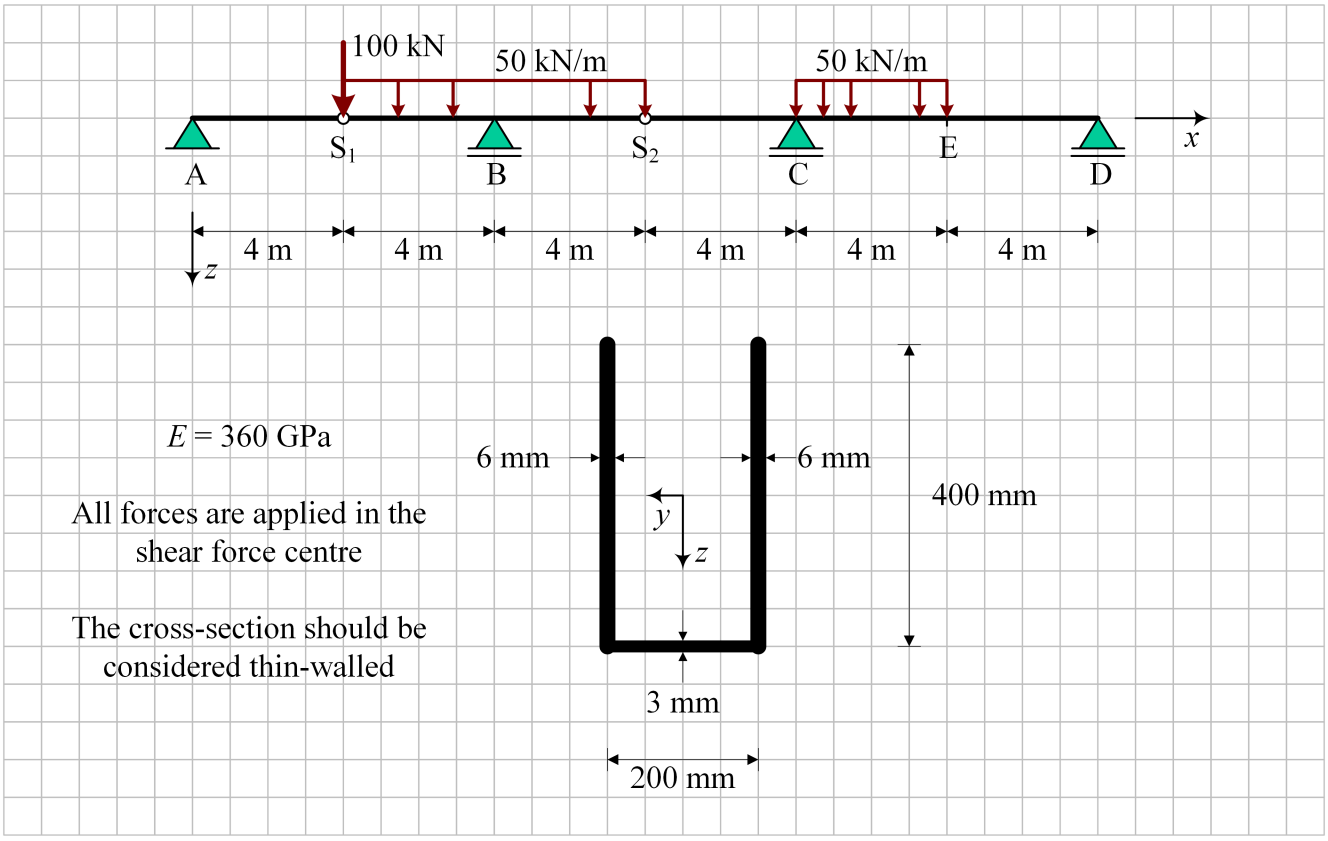
Before you start this test, a few remarks:

- Write down your first and last name in the field on the top left corner of this page
- Fill in your student number on the top right corner of this pages. Fill in the number in the boxes on top, and mark the corresponding number. Fill the corresponding cricle with the number completely.
- Try to do this exercise on your own. If you cannot proceed, you're free to discuss the exercise with your fellow students and the teacher. If you do so, indicate how this helped you.

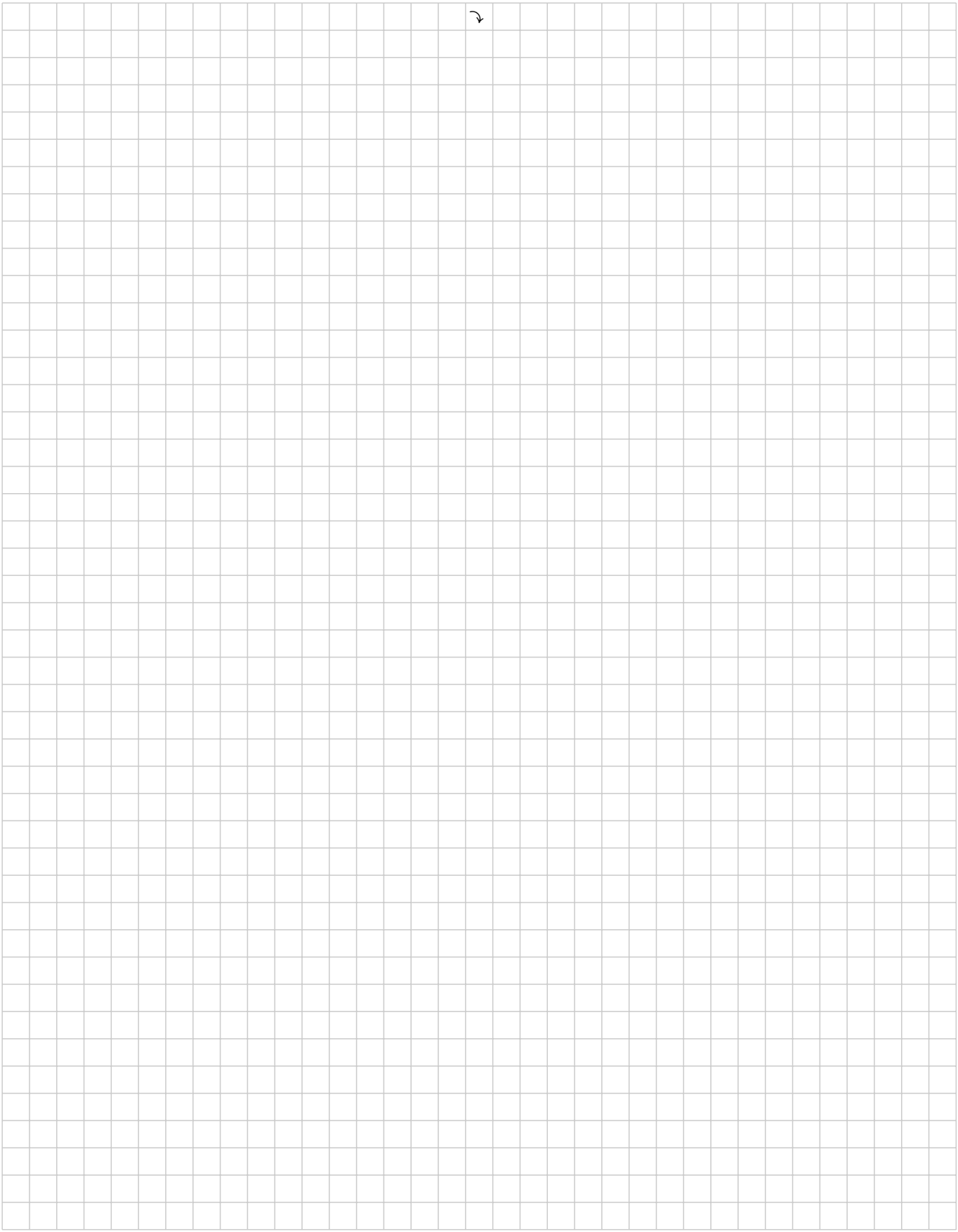
Good luck!

Kind regards, Tom van Woudenberg

Given is the structure as shown below

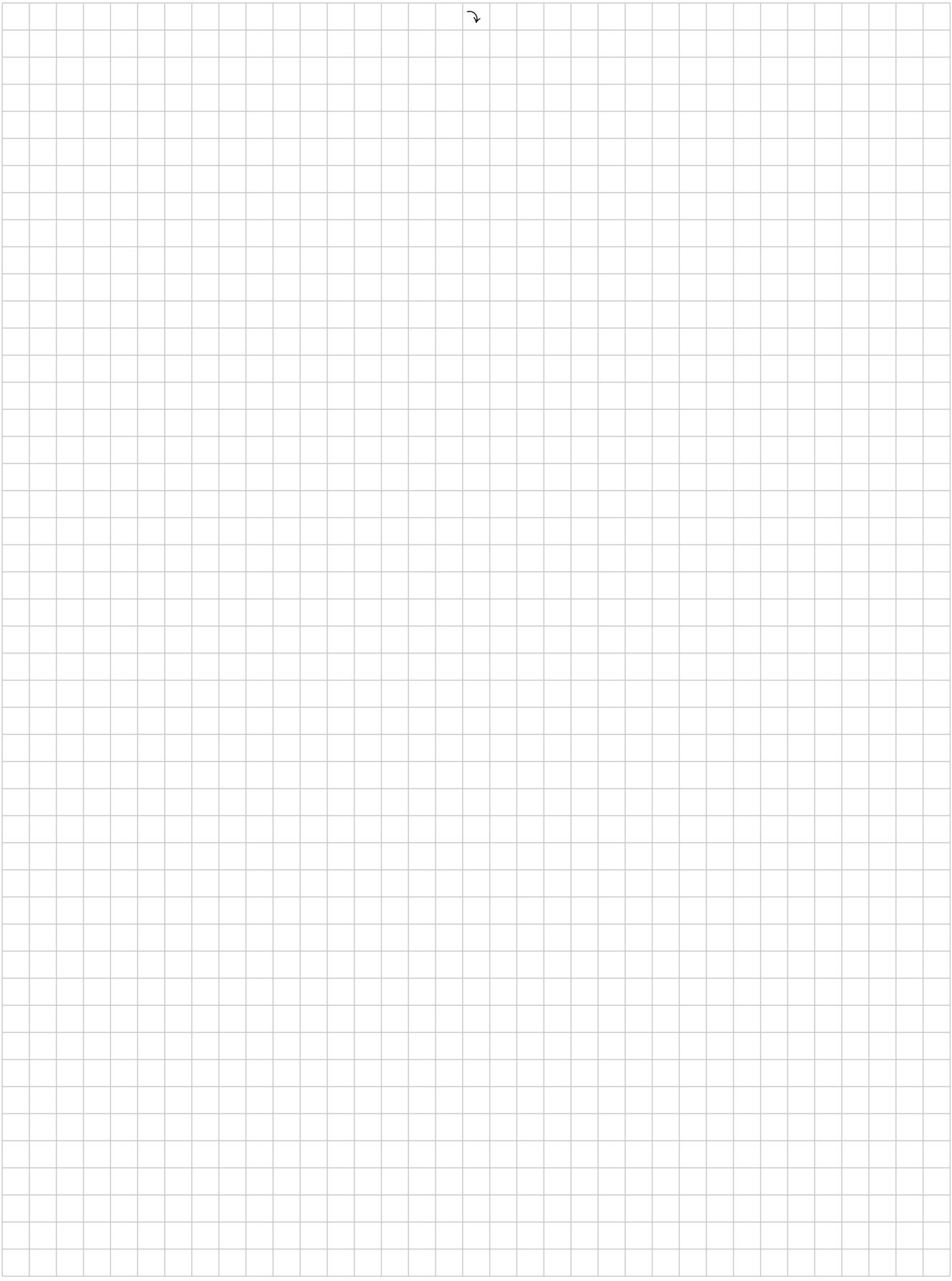


1a Determine the support reaction at D.

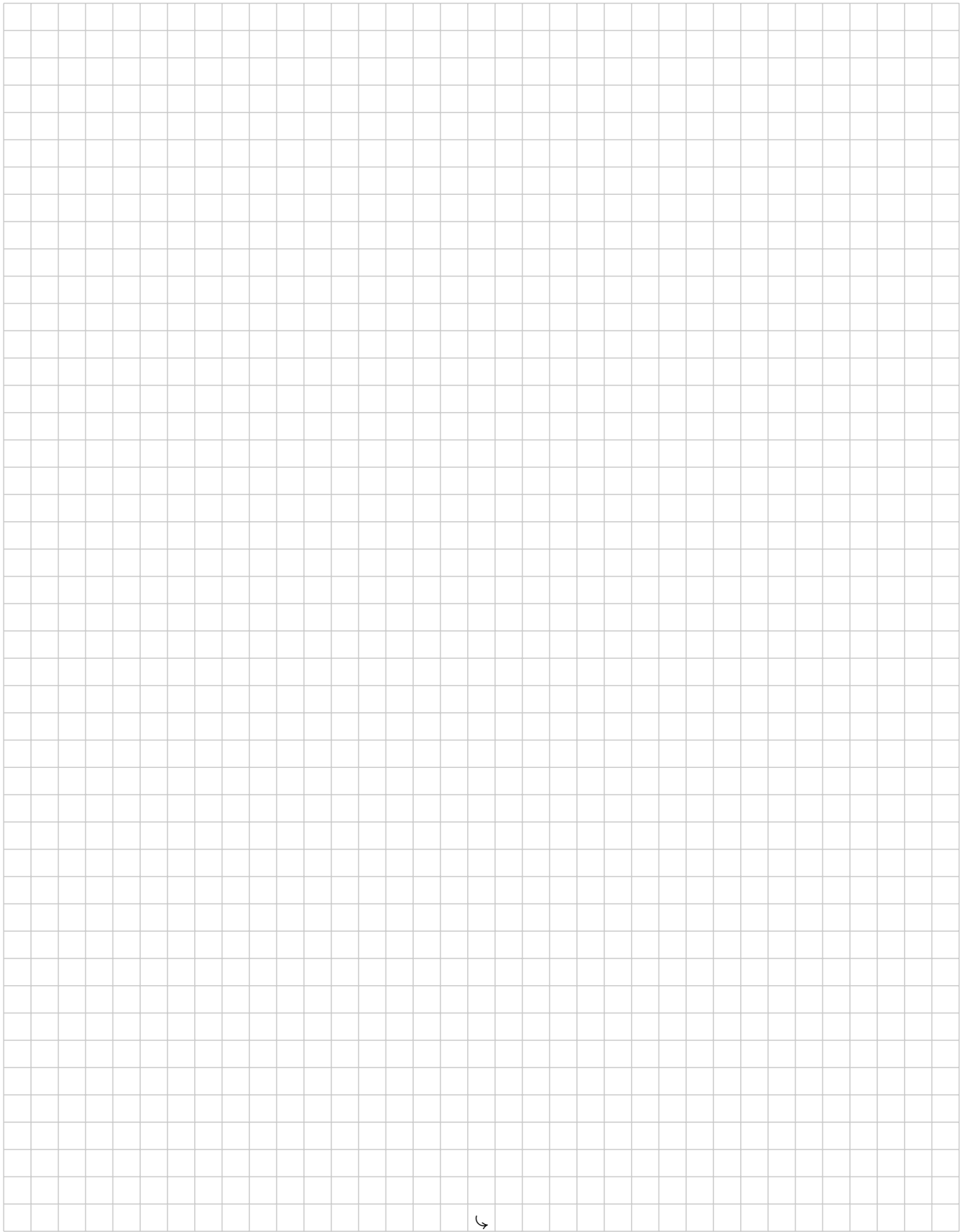


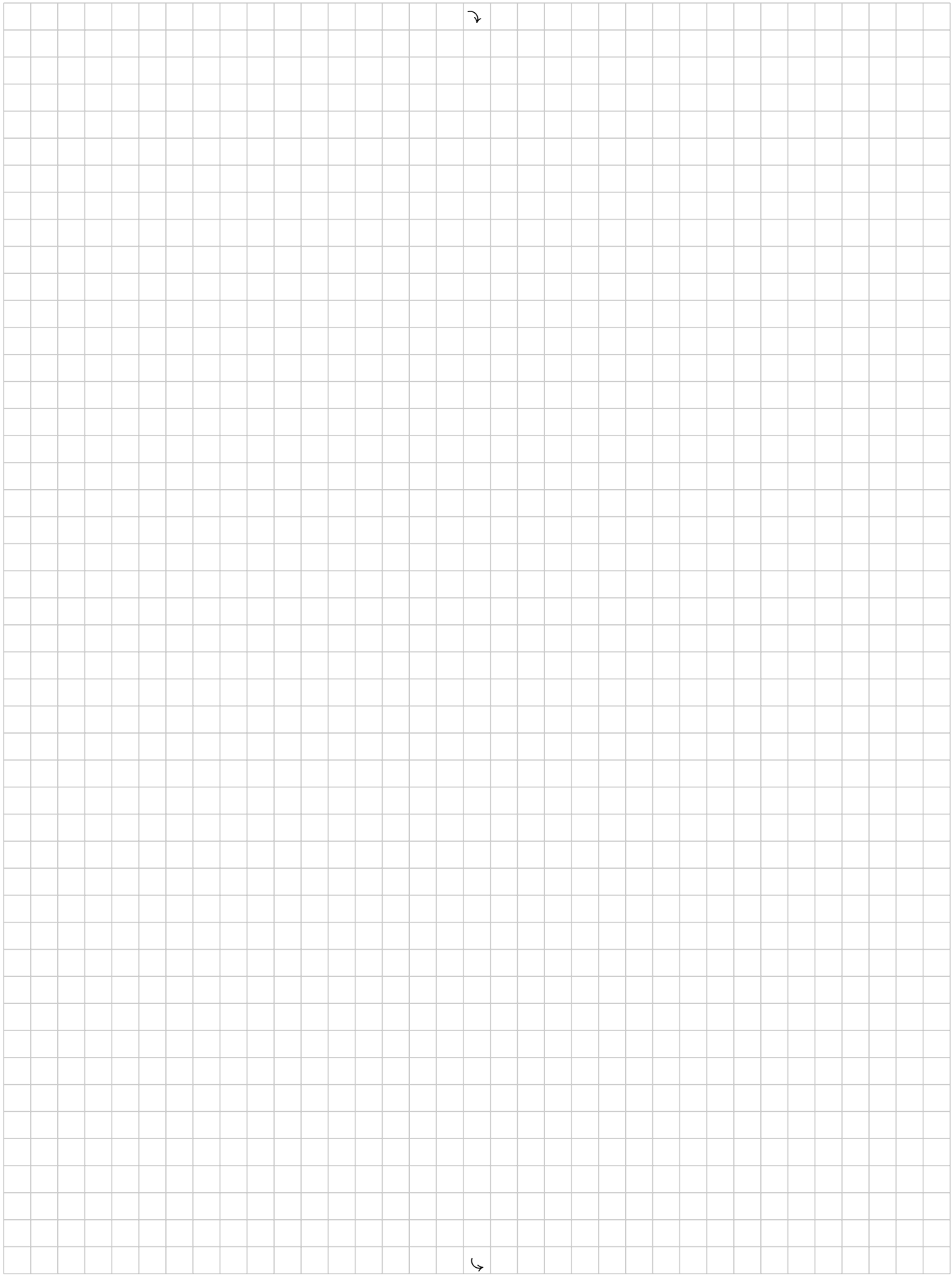
1b Determine the bending moment in C using virtual work.

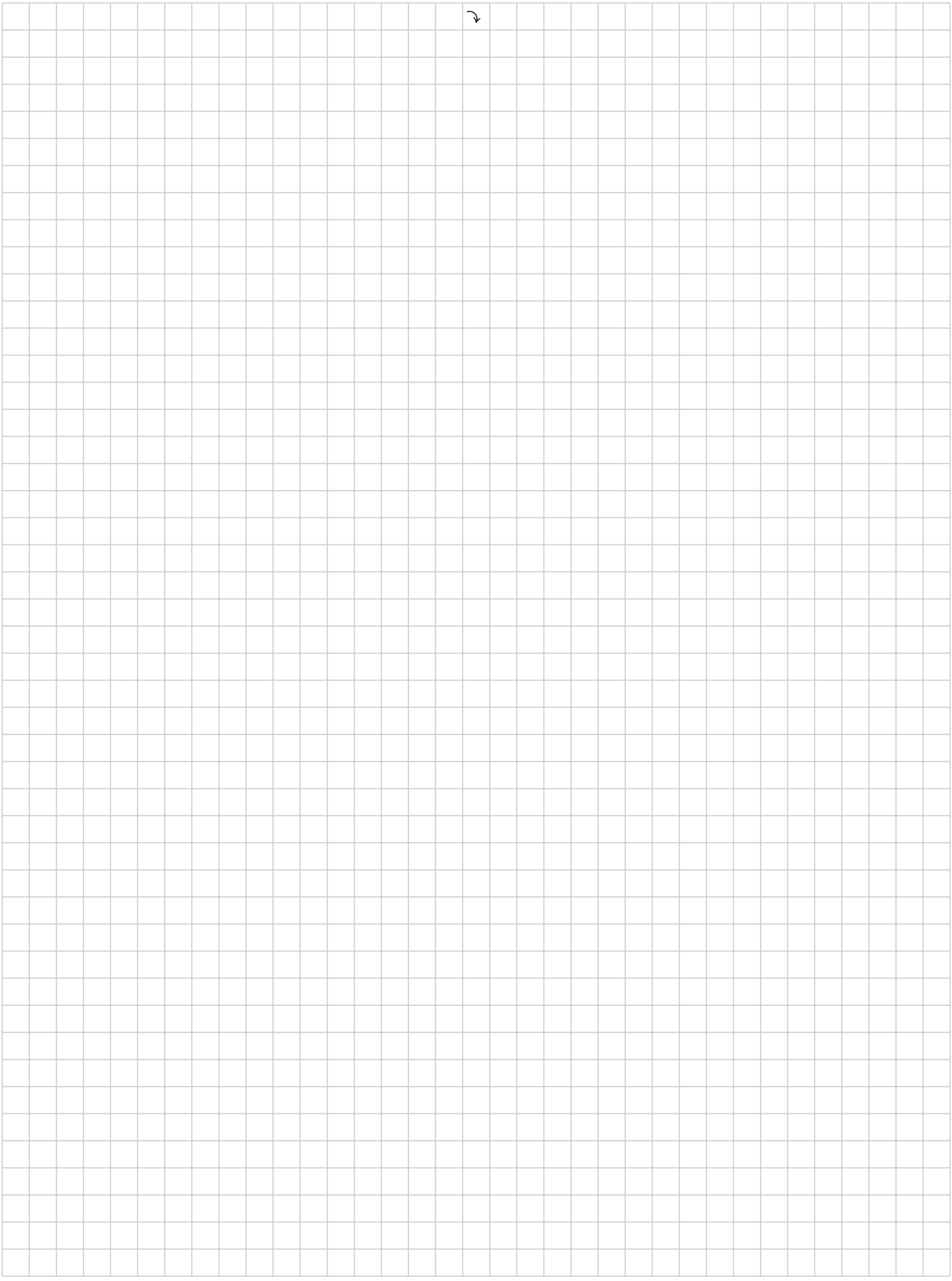
1c Draw the bending moment diagram including values.

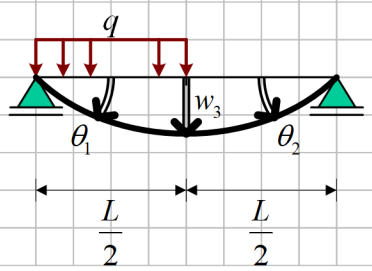


1d Draw the shear stress distribution just left of C including values.



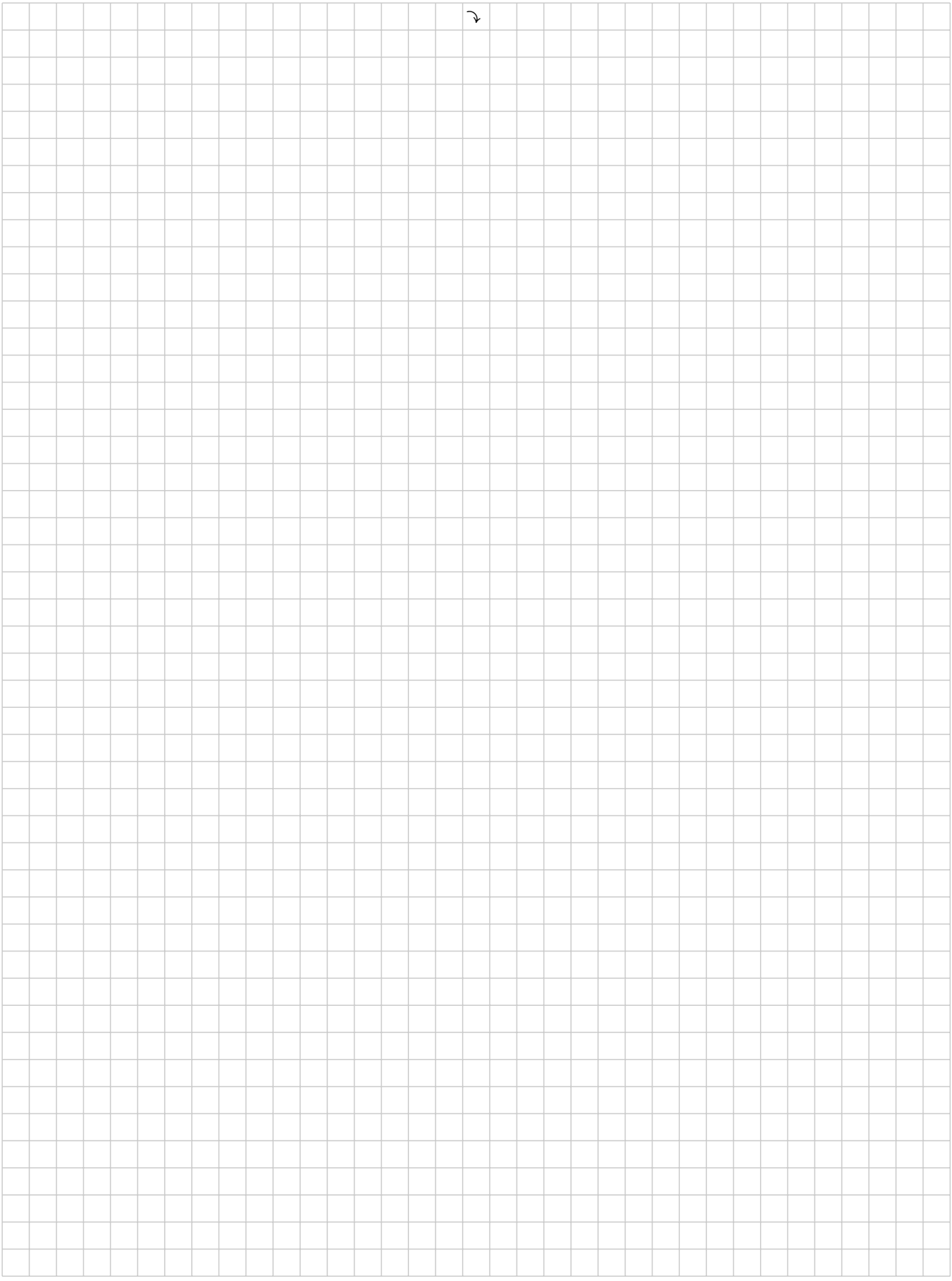






$$\theta_1 = \frac{3qL^3}{128EI} \qquad w_3 = \frac{5qL^4}{768EI} \qquad \theta_2 = \frac{7qL^3}{384EI}$$

1e Determine the displacement at S_2. You can use the additional forget-me-not.



1f Sketch the displaced structure without values. Make the following explicitly clear: direction of curvature, straight or curved sections, kinks, and points or parts which are not displaced.