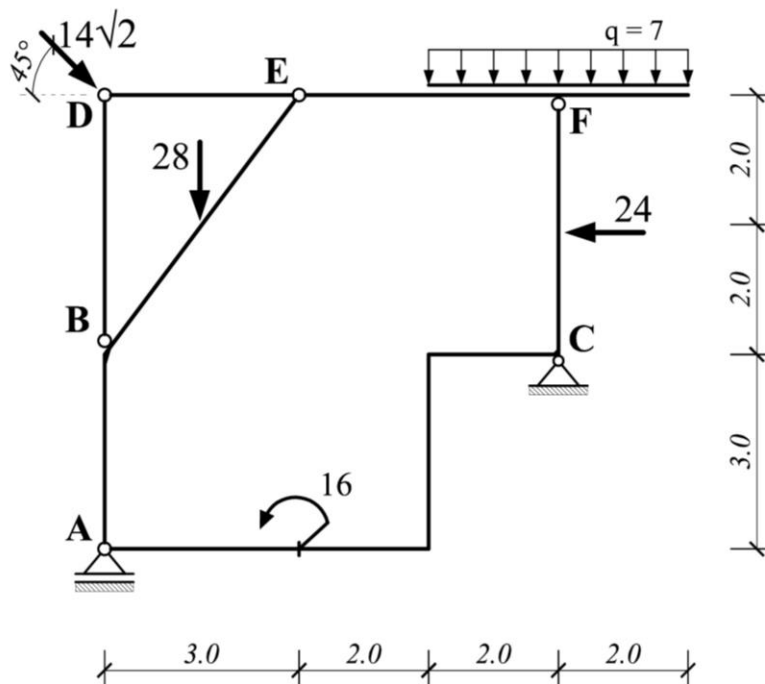


НАЦРТАТИ ДИЈАГРАМЕ СИЛА У ПРЕСЕКУ ЗА ПРИКАЗАНЕ НОСАЧЕ

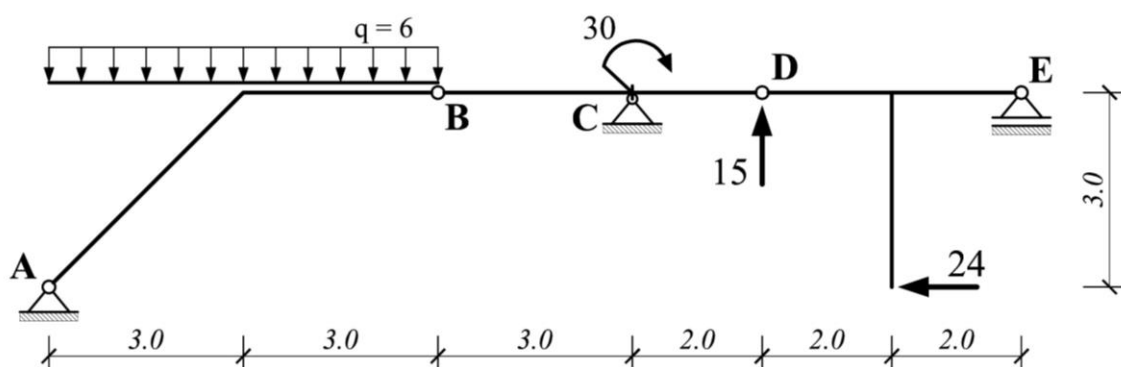
ГРУПА **A**

1.
(41%)

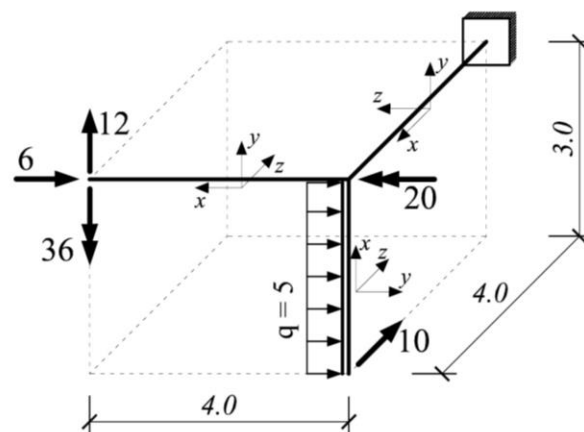


Време предвиђено
за израду испита:
2 сата и 15 минута

2.
(36%)



3.
(23%)

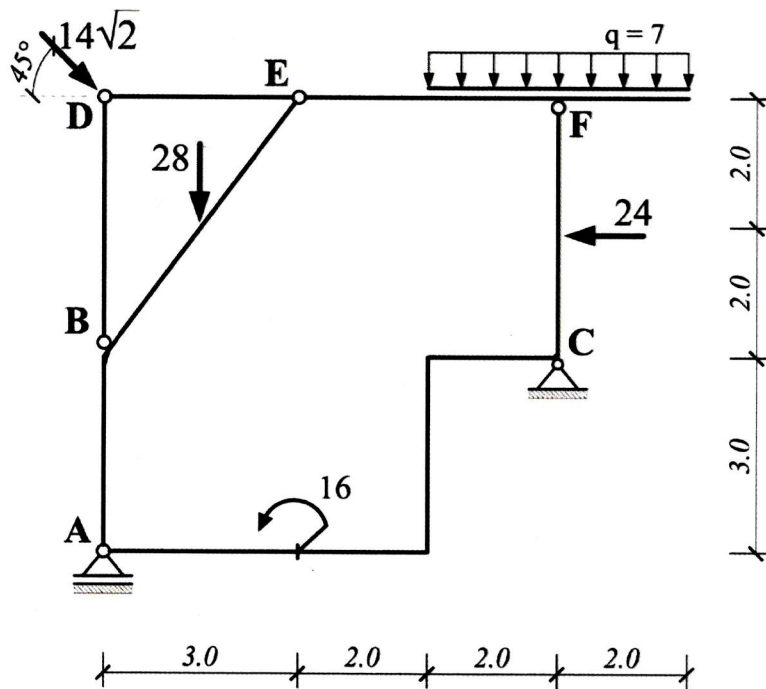


(kN, m)

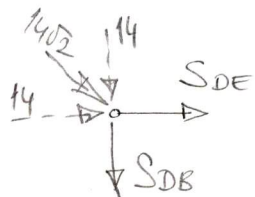
НАПОМЕНА: Услов за полагање писменог дела испита је: » минимум 50% укупног броја поена,
» минимум 50% тачан дијаграм момената у 1. или 2 зад.

ГРУПА **A**

1.

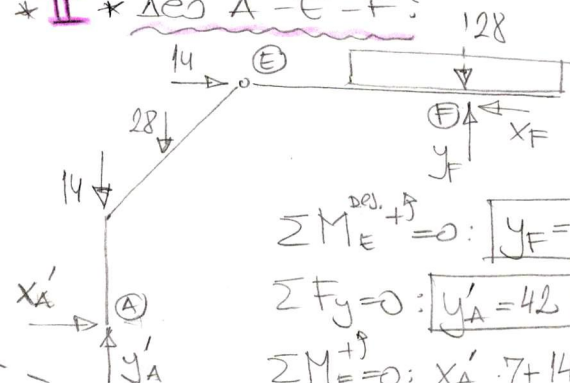


I чвор D:



$$\begin{cases} S_{DE} = -14 \\ S_{DB} = -14 \end{cases}$$

II Δсв A-E-F:



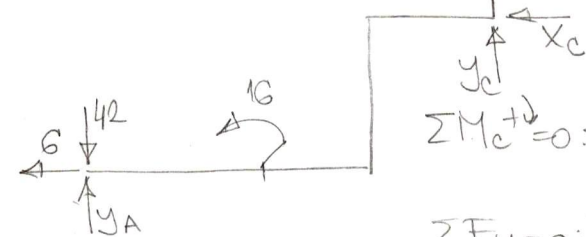
$$\sum M_E^{des. +} = 0: Y_F = 28$$

$$\sum F_y = 0: Y_A' = 42$$

$$\sum M_F^{+} = 0: X_A' \cdot 7 + 14 \cdot 7 + 28 \cdot 5.5 - 42 \cdot 7 = 0 \quad X_A' = 6$$

$$\sum F_x = 0: X_F = 20$$

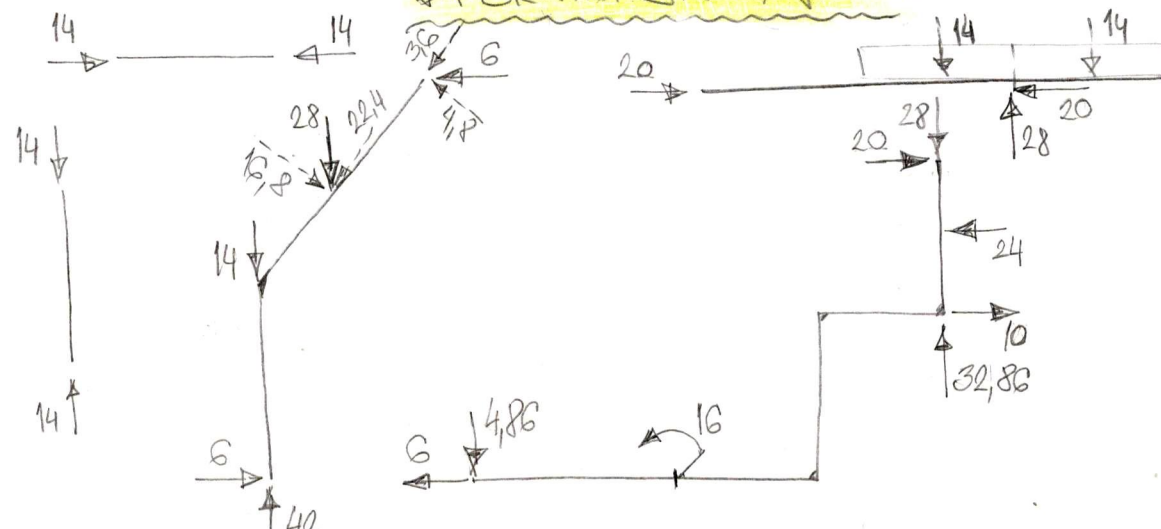
III Δсв A-C-F:

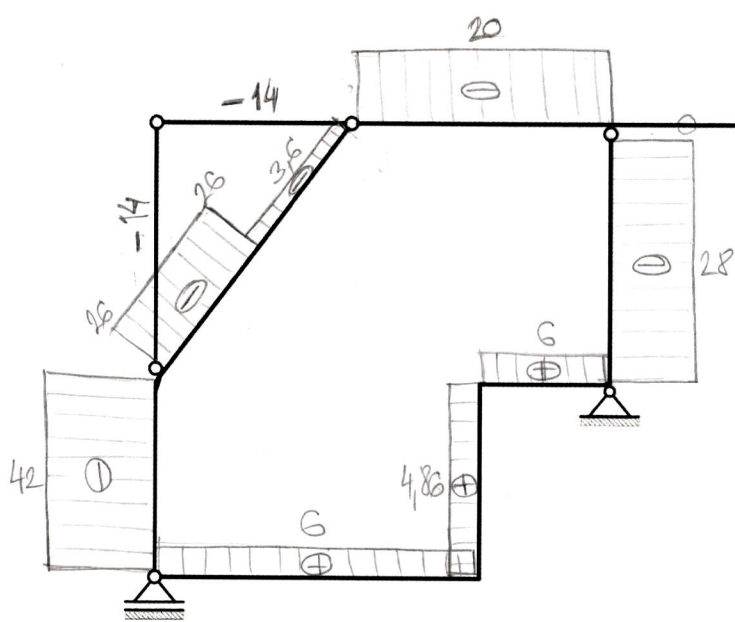


$$\sum M_C^{+} = 0: Y_A \cdot 7 - 42 \cdot 7 + 6 \cdot 3 - 16 - 24 \cdot 2 + 20 \cdot 4 = 0 \quad Y_A = 37.14$$

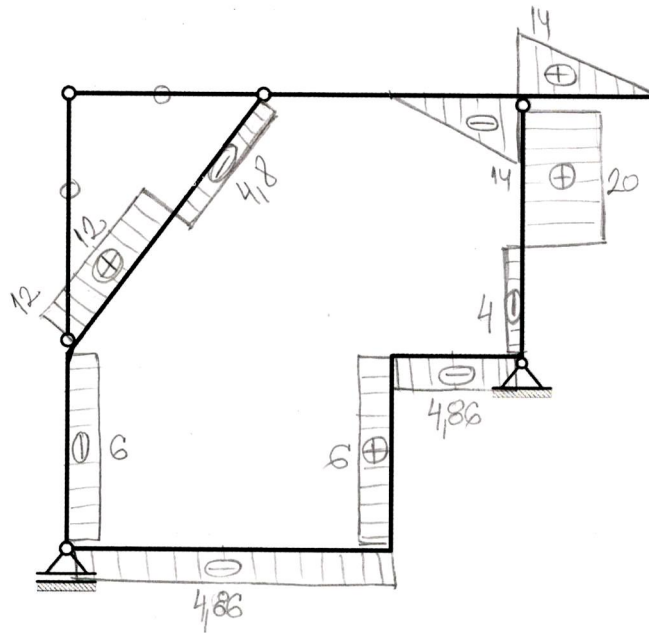
$$\sum F_y = 0: Y_C = 32.86 \quad \sum F_x = 0: X_C = -10$$

РЕКАПИТУЛАЦИЈА



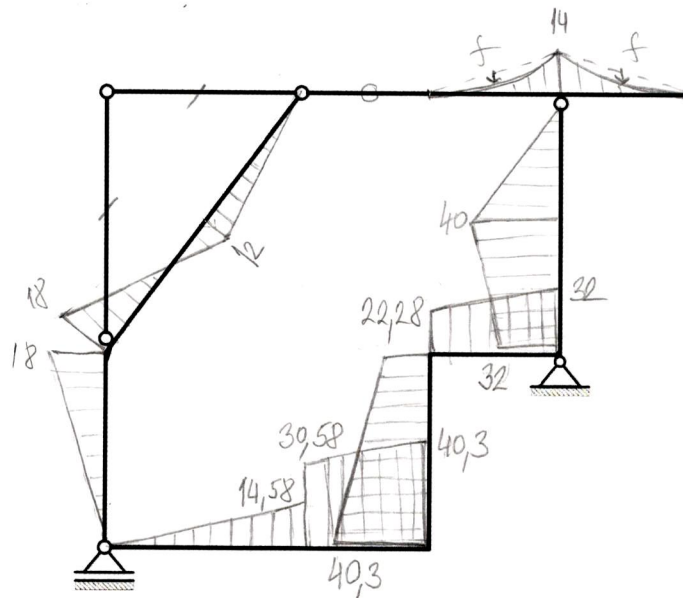


N



T

$$f = \frac{7 \cdot 2^2}{8} = 3,5$$



M

$$y_E = 18$$

$$\sum F_x = 0: X_D = 24$$

Diagram of a beam with a distributed load of 30 units/m over a 3m span, followed by a 5m span with a point load of 33 units at the end. The beam is supported by a pin support at A and a roller support at B. The reactions are calculated as follows:

$$\sum M_B^+ = 0: y_C \cdot 3 + 33 \cdot 5 = 0$$

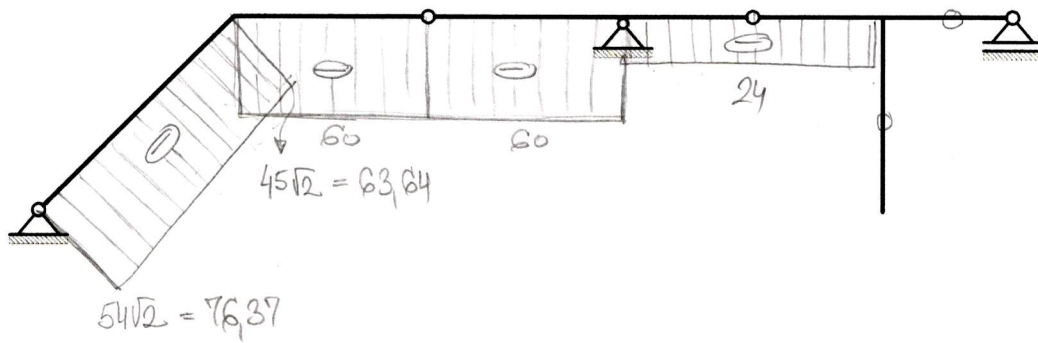
$$\sum F_y = 0: y_A = 48$$

$$\sum M_C^{+ \downarrow} = 0: y_A \cdot 3 - x_A \cdot 3 = 0$$

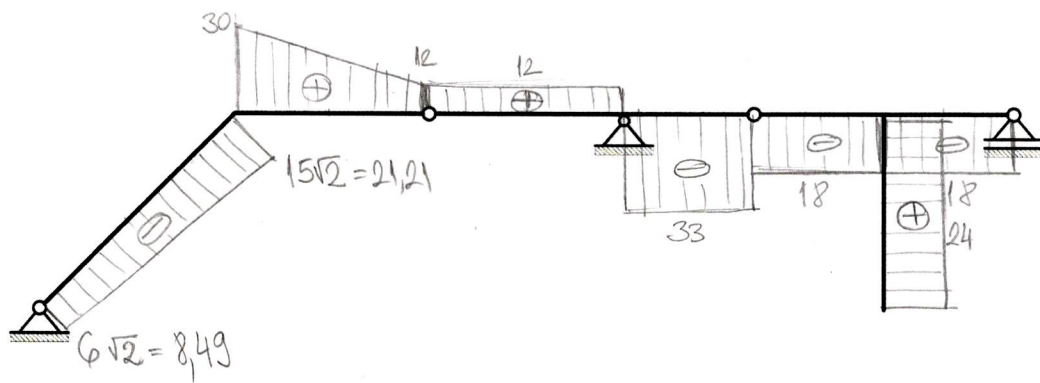
$$\Sigma F_{y=0}: y_A = 48$$

$$X_A = 60$$

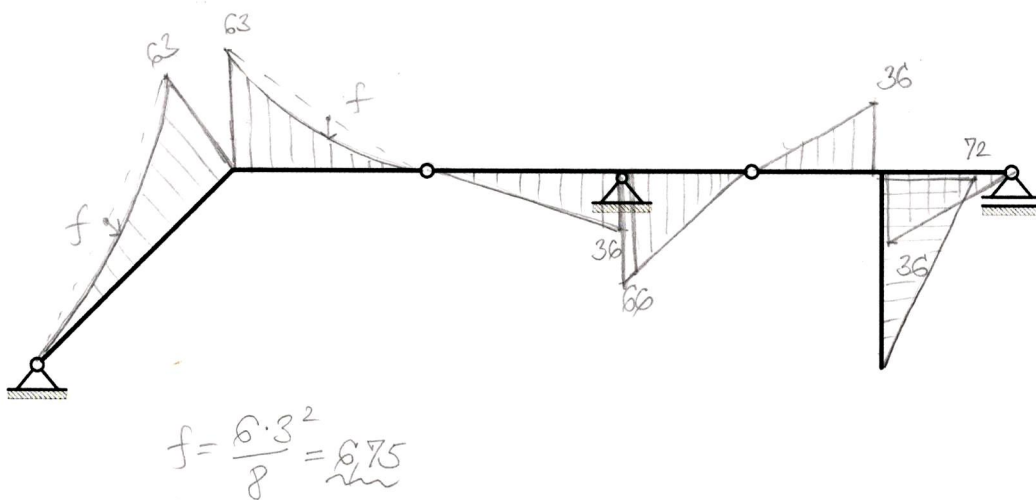
$$\sum F_x = 0 : \boxed{x_c = 36}$$



N



T



M

3.

