



نوع التقييم: بحث مرجعي

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|----------------------------|---------------------|
| | اسم الطالب |
| | الرقم الأكاديمي |
| أنظمة إنشائية | اسم المقرر |
| | المستوى |
| الأنظمة الإنشائية المختلفة | عنوان البحث المرجعي |

| التوقيع | الدرجة | رقم السؤال |
|---------|--------|---------------|
| | | السؤال الأول |
| | | السؤال الثاني |
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طريقة التقديم:

على كل طالب ارسال الإجابات (بخط اليد) بصيغة pdf على البريد الإلكتروني: waminterior@gmail.com

مع تمنياتي بالتوفيق والنجاح ،،

أ.م . د. / وليد أبو الوفا محمد + اللجنة



- **Answer all questions**
- **The exam consists of 5 questions distributed over 13 pages**

Problem 1: (10 marks)

For the architectural plan given in Fig. 1 (page 1) it is required to find a suitable system for columns and draw it to scale 1/100 over Fig. 2 (page 2) :- take rectangular columns as 30 x 60 and circular columns (if any) as 40 cm diameter.

Problem 2: (30 marks)

For the architectural plan given in Fig. 1 (page 1) it is required to find a suitable solid slab system for the multiple floor and draw it to scale 1/100 over Fig. 2 (page 2).

Problem 3: (10 marks)

For the given architectural plan given in Fig. 1 (page 1) it is required to find a suitable flat slab system for the multiple floor and draw it to scale 1/100 in Fig. 3 (page 3).

Problem 4: (25 marks)

It is required to cover an area of 16 x 25 m by a truss system. Columns are provided on the perimeter only. The columns total height is 8.0 m. Use W shape truss. Determine the different parameters of the truss system then draw to scale 1:100 a general layout (plan, main system, vertical and longitudinal bracing sec. and one of the end gables). Use pages from 5-9.

Problem 5: (25 marks)

For the main truss shown in Fig. 4 (page 10), it is required to:
a- Calculate the loads on the shown truss due to DL, LL, WL only according to the ECOL. b- Calculate the forces acting on the shown member (member ab) due to DL and LL only.

Given data:

Weight of corrugated sheets = 18 kg/ m², weight of structure = 20 kg/m², height of truss column = 6.0 m, wind velocity = 40 m/ sec. The spacing between main system = 7.0 m.

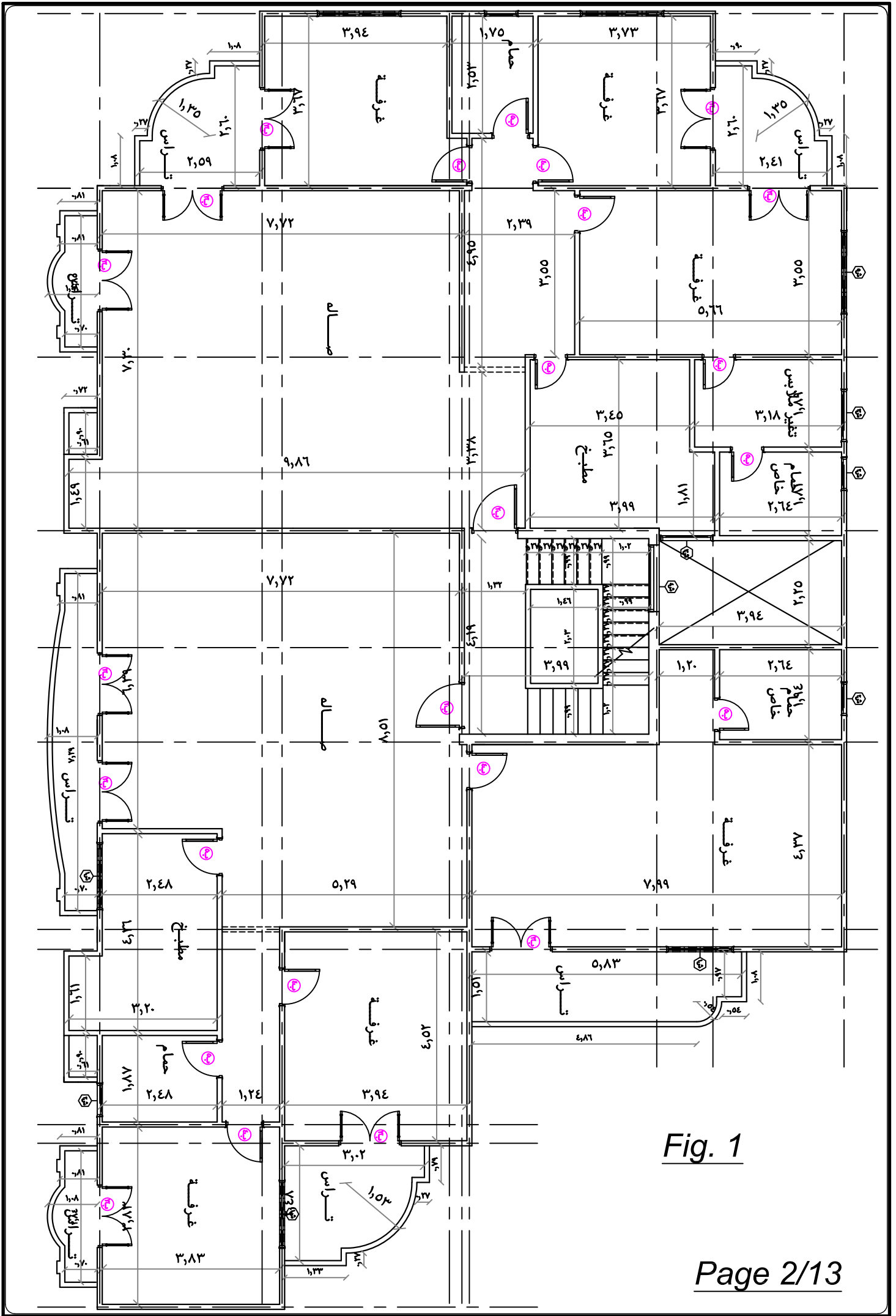


Fig. 1

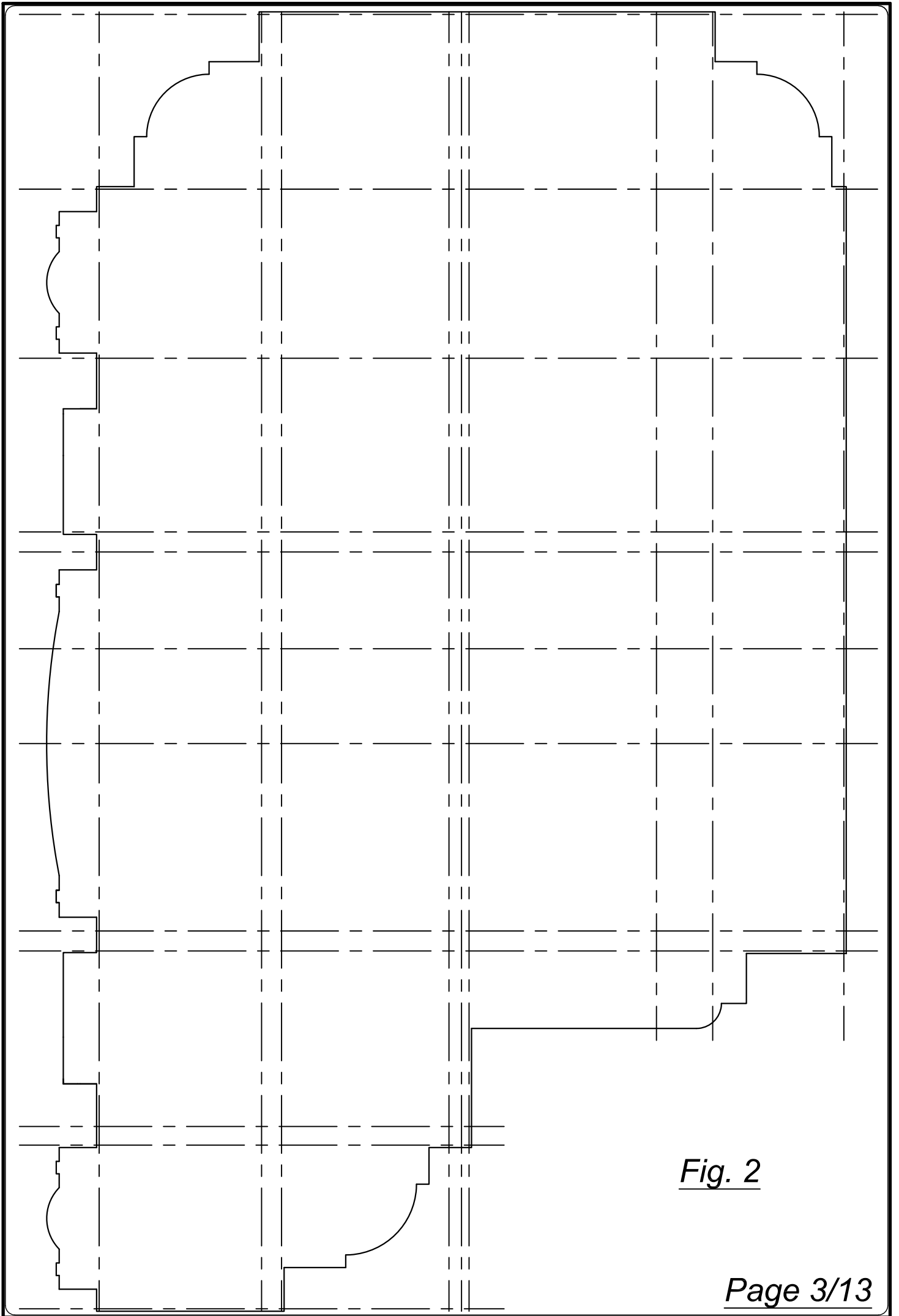


Fig. 2

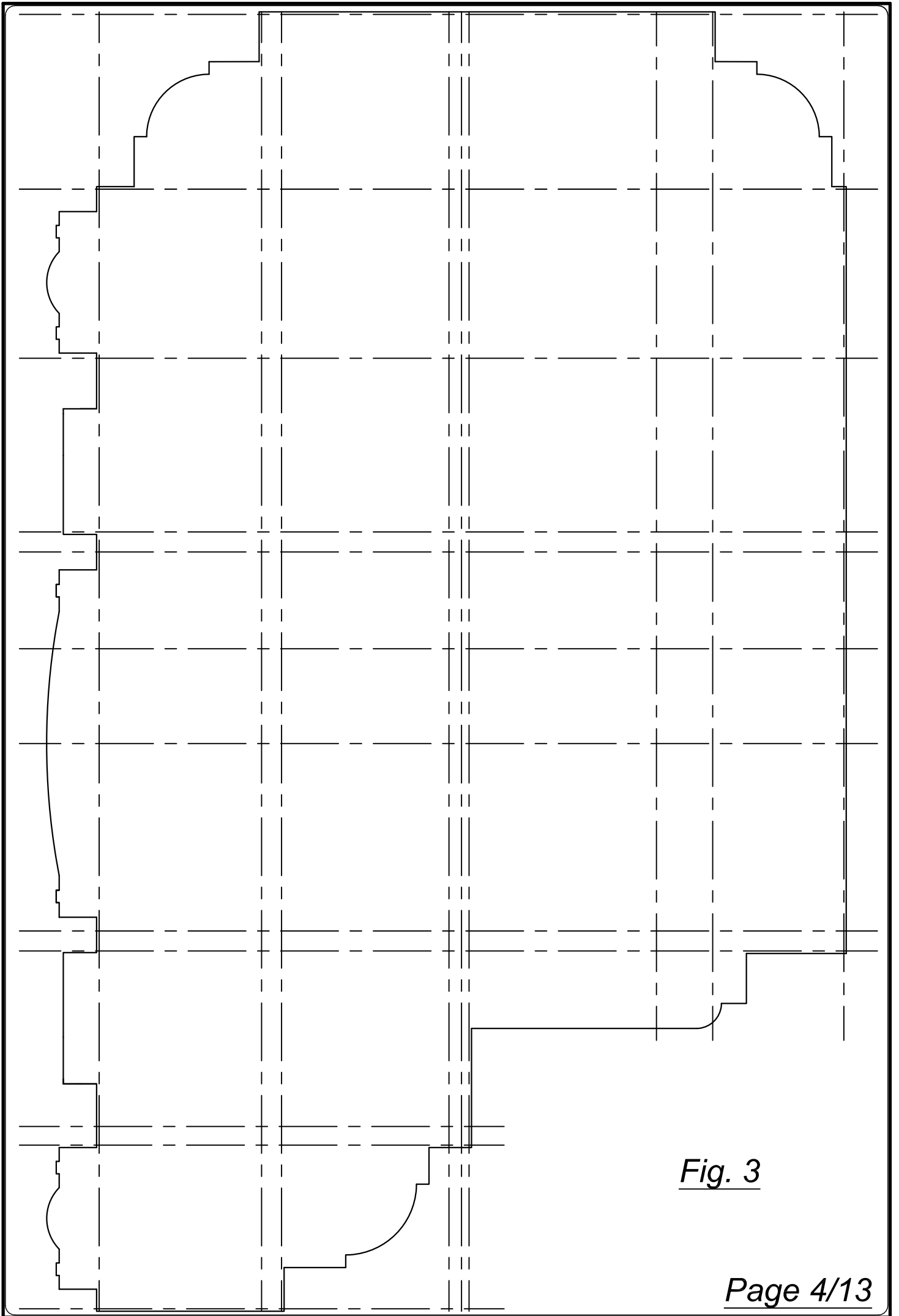


Fig. 3

Solution of problem 4:

a: Calculations

Contiue solution of problem 4:

Contiue solution of problem 4:

Contiue solution of problem 4:

Contiue solution of problem 4:

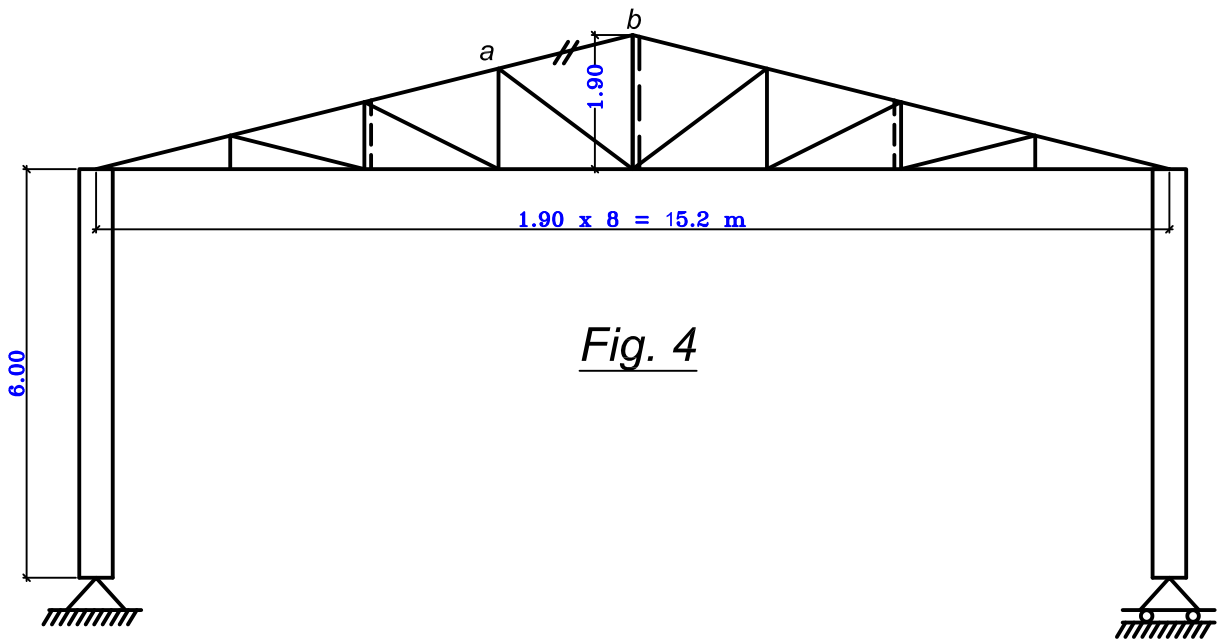


Fig. 4

Solution of problem 5:

Continue solution of problem 5:

Continue solution of problem 5:

Continue solution of problem 5:

*End of questios
With my deepest best wishes
Assoc. Prof. Waleed Abo El-Wafa*