**Laboratórne cvičenie č.6**

**Meno:** Kristína Benčičová

**Dátum:** 17.04.16

**Názov:** Overenie momentovej vety

**Pomôcky:** momentová veta, závažia, stojan, dĺžkové meradlo

**Teoretická časť:**

$$r\_{4}$$

$$r\_{1}$$

$$r\_{2}$$

$$r\_{3}$$

$$F\_{4}$$

$$F\_{2}$$

$$F\_{1}$$

$$F\_{3}$$

 Ak je tyč v rovnováhe, potom platí:

$M\_{1}$ + $M\_{2}$ + $M\_{3}$ + $M\_{4}$ = 0

$M\_{1}$ + $M\_{2}$ + $M\_{3}$ + $M\_{4}$ = 0

 teda

**Postup:** 1.Zostavíme pomôcky podľa obrázka.

2.Na momentovú tyč zavesíme postupne 1,2,...,7 závaží.

 3.Posúvaním pôsobiska jedného z nich nájdeme rovnováhu.

 4.Odmeriame ramená gravitačných síl závaží, údaje zapíšeme do tabuľky.

 5.Vypočítame momenty jednotlivých síl a celkový moment.

**Tabuľky:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Č.m.** | **F1** | **F2** | **F3** | **F4** | **F5** | **F6** | **F7** | **r1** | **r2** | **r3** | **r4** | **r5** | **r6** | **r7** | **M1** | **M2** | **M3** | **M4** | **M5** | **M6** | **M7** | **M** |
| **1** | **0,5** | **-1** |  |  |  |  |  | **16** | **8** |  |  |  |  |  | **8** | **-8** |  |  |  |  |  | **0** |
| **2** | **0,5** | **0,5** | **-1** |  |  |  |  | **14** | **10** | **12** |  |  |  |  | **7** | **5** | **-12** |  |  |  |  | **0** |
| **3** | **0,5** | **1** | **0,5** | **-1** |  |  |  | **10** | **8** | **6** | **16** |  |  |  | **5** | **8** | **3** | **-16** |  |  |  | **0** |
| **4** | **1** | **1** | **0,5** | **-1** | **-0,5** |  |  | **12** | **6** | **2** | **12** | **14** |  |  | **12** | **6** | **1** | **-12** | **-7** |  |  | **0** |
| **5** | **0,25** | **1** | **1** | **-0,5** | **-0,5** | **-1** |  | **18** | **12** | **10** | **7** | **14** | **16** |  | **4,5** | **12** | **10** | **-3,5** | **-7** | **-16** |  | **0** |
| **6** | **0,5** | **1** | **1** | **0,5** | **-0,5** | **-0,5** | **-1** | **18** | **13** | **9** | **2** | **10** | **16** | **19** | **9** | **13** | **9** | **1** | **-5** | **-8** | **-19** | **0** |