中國文化大學 九十四 學年度 第一學期 期末 考試試卷					
考試科目	任課老師	系級	考試日期	份數	備註
應用力學	陳為仁	機一 A	95/01/10	70	可用計算機

1. The link shown in Fig. 1 is pin-connected at A and rests against a smooth support at B. (1) Draw the free body diagram of the link. (2) Compute the reactions at support B and the pin A. (25)

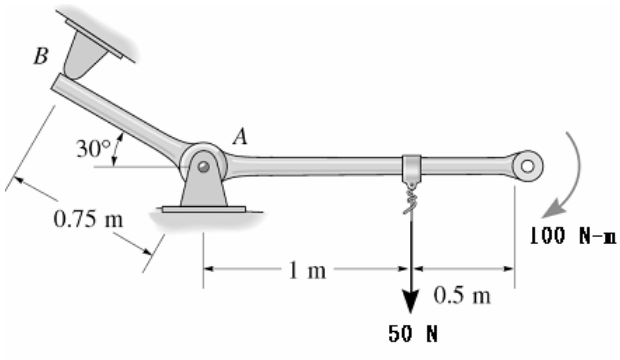

Fig. 1

2. Determine the horizontal and vertical components of force at the pin A and the reaction at the rocker B of the curved beam as shown in Fig, 2. (20)

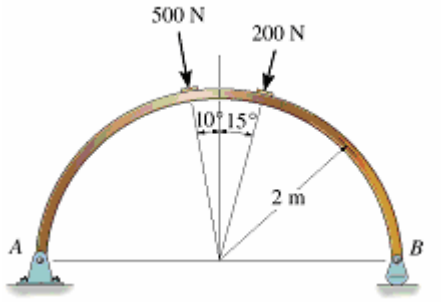

Fig. 2

3. The rod AB subjected to the 200-N force is held in equilibrium by a ball-and-socket joint A, and two cables BD and BE as shown in Fig. 3. Determine the tension in cables BD and BE and the reactions at the joint A. (25)

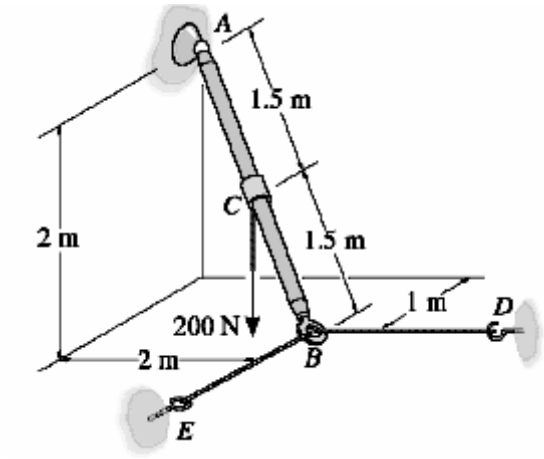

Fig. 3

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4. The truss is subjected to the 130-kN load at joint A shown in Fig. 4. (1) Determine the support reactions at joints E and F. (2) Determine the force in members BD, CD and CE of the truss and indicate whether the members are in tension or compression. (25)

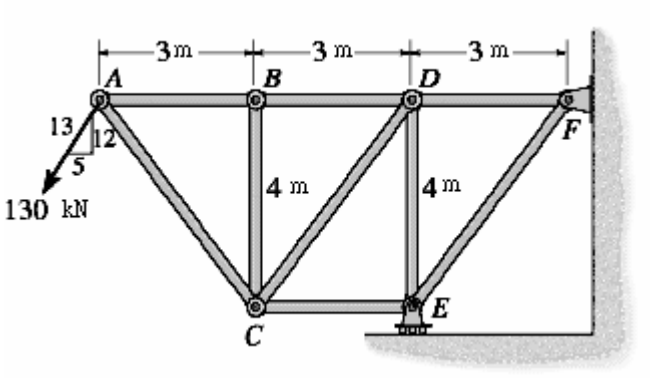

Fig. 4

5. The three-member frame as shown in Fig. 5 is fixed at support D. (1) Determine the horizontal and vertical component of force at pins A, B, and C. (2) Determine the reactions at the fixed support D. (25)

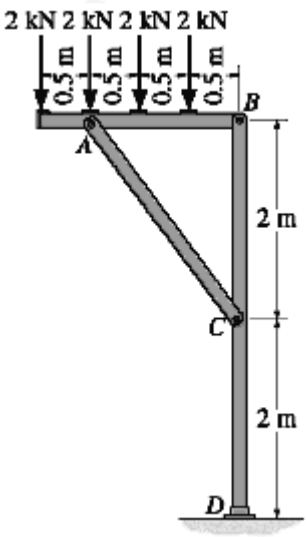

Fig. 5