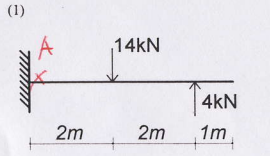


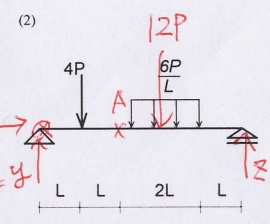
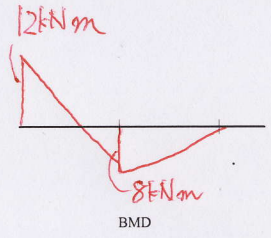
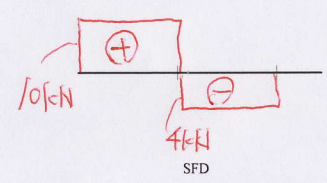
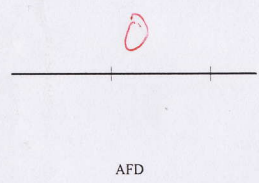
建築構造力学 I a 同演習	学生証 番号	氏名	解答	得点
第2回 中間試験 実施日2012/06/20				

軸力図 (AFD)、せん断力図 (SFD)、曲げモーメント図 (BMD) を図中に書きなさい。
ただし各断面力が部材内ですべて 0 の場合は、0 を図に書きなさい。



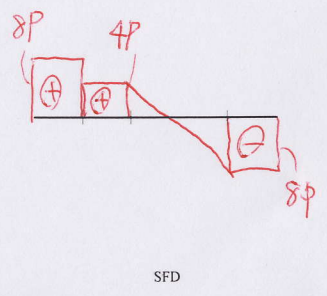
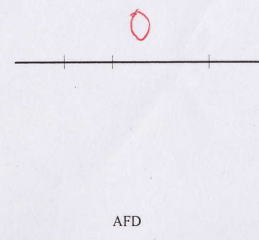
点A
 $\sum X_i = x = 0$
 $\sum Y_i = y + z - 10 = 0 \Rightarrow y = 7kN$
 $\sum Z = 4x + 8kNm - 20kNm = 0$
 $4x = 12kN$
 $x = 3kN$

点A
 $N_A = 0$
 $Q_A - 14kN + 4kN = 0$
 $Q_A = 10kN$
 $M_A - 28kNm + 16kNm = 0$
 $M_A = 12kNm$

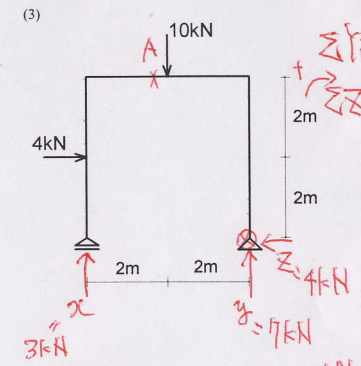
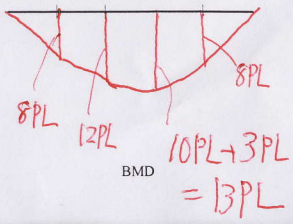


点A
 $\sum X_i = x = 0$
 $\sum Y_i = y + z - 16P = 0 \Rightarrow y = 8P$
 $\sum M_i = 4PL + 36PL - 5zL = 0$
 $5z = 40P$
 $z = 8P$

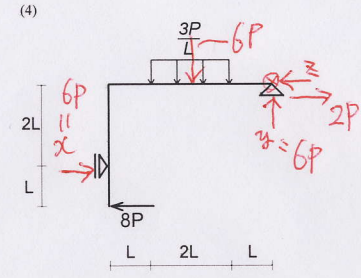
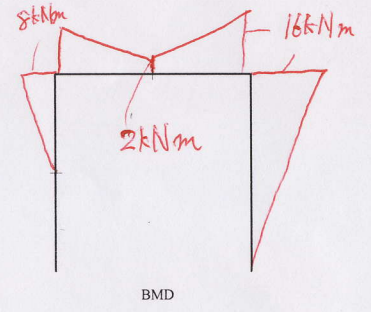
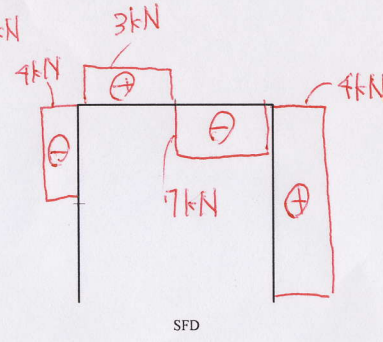
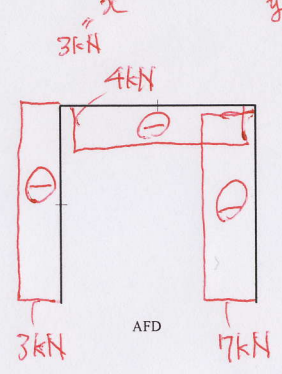
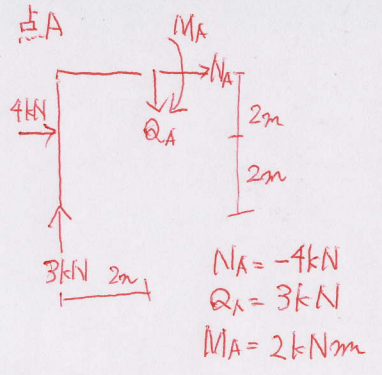
点A
 $N_A = 0$
 $Q_A = 4P$
 $16PL - 4PL - M_A = 0$
 $M_A = 12PL$



$\frac{(12+8)}{2} PL = 10PL$
 $\frac{3/6P}{\frac{1}{2} \times AL^2} = 3PL$
 $8z = 10PL - 3PL = 7PL$



$\sum X_i = 4kN - z = 0$
 $z = 4kN$
 $\sum Y_i = x + y - 10 = 0 \Rightarrow y = 7kN$
 $\sum Z = 4x + 8kNm - 20kNm = 0$
 $4x = 12kN$
 $x = 3kN$



$\sum X_i = x - 8P - z = 0 \Rightarrow z = -2P$
 $\sum Y_i = y - 6P = 0 \Rightarrow y = 6P$
 $\sum M_i = 24PL - 2xL - 12PL = 0$
 $x = 6P$

$\frac{(12+6)}{2} PL = 9PL$
 $\frac{3P}{\frac{1}{2} \times AL^2} = \frac{3}{2} PL$

