

Problem 2 (a)

$$C_2^n = \frac{n(n-1)}{2}$$

Problem 2 (b)

$$n!$$

Problem 2 (c) (i)

$$1.1 + 1.4 + 0.5 = 3$$

Problem 2 (c) (ii)

$$MWES : 1.1 + 0.6 + 0.5 = 2.2$$

$$EMWS : 1.4 + 1.1 + 0.7 = 3.2$$

$$SMEW : 0.9 + 1.4 + 0.6 = 2.9$$

$$WEMS : 0.6 + 1.4 + 0.9 = 2.9$$

$$WSEM : 0.7 + 0.5 + 1.4 = 2.6$$

$$WMSE : 1.1 + 0.9 + 0.5 = 2.5$$

Problem 2 (c) (iii)

$$2.2 < 2.5 < 2.6 < 2.9 < 3.2$$

$\rightarrow MWES$

Problem 2 (c) (is)

$$WMES \rightarrow MWES \rightarrow MSEW$$

$$\text{total length} = 2.0$$