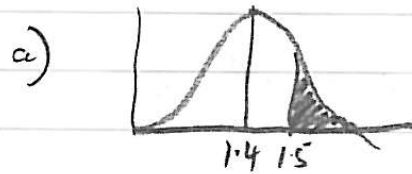


7.5 Q1

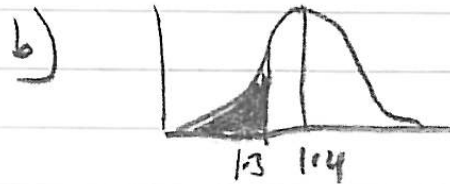
$$\bar{x} = 1.4$$
$$\sigma = 0.1$$



"R" function (Calc).

$$Z = \frac{1.5 - 1.4}{0.1}$$
$$= 1$$

$$R(1) = \underline{0.15866}$$

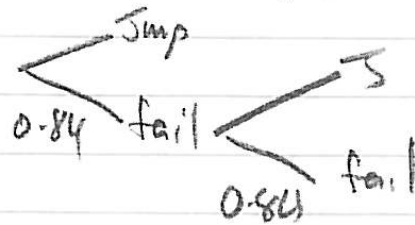


"P" function.

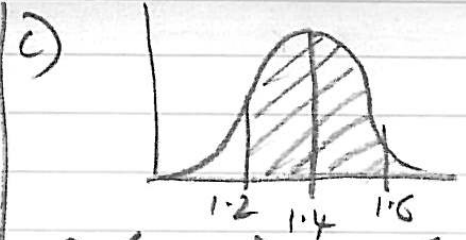
$$Z = \frac{1.3 - 1.4}{0.1}$$
$$= -1$$

$$P(-1) = 0.15866$$

- Think of P tree,



$$2 \times \text{fail} = 0.15866^2$$
$$= \underline{0.0252}$$



$$Q(X=1.2) + Q(X=1.6)$$
$$Z = \frac{1.2 - 1.4}{0.1} \quad Z = \frac{1.6 - 1.4}{0.1}$$
$$= -2 \quad = 2$$

$$Q(-2) = 0.4773 \quad Q(2) = 0.4773$$
$$+$$
$$= 0.9545$$

P-tree again...

$$P = 0.9545^3$$
$$= \underline{0.8696}$$

d)  $R(2) = 0.02275$  success  
→ fail = 0.97725

$$P(1/3) = 0.02275 \times 0.97725^2$$
$$= \underline{0.0217}$$

↑  
not sure why  
book is different.