

134. K: King Mattress  
Q: Queen Mattress  
T: Twin Mattress

Asked to find  $P(Q) + P(K)$

Equations from problem:  $P(T) + P(K) + P(Q) = 1$

$$P(Q) = \frac{P(T) + P(K)}{4}$$

$$P(K) = 3 \cdot P(T)$$

If  $P(T) = x$

then

$$P(K) = 3x$$

$$\text{and } P(Q) = \frac{(x + 3x)}{4} = x$$

From 1<sup>st</sup> equation:

$$x + 3x + x = 1$$

$$x = 0.2$$

$$P(K) = 3(0.2) = 0.6$$

$$P(Q) = 0.2$$

$$P(Q) + P(K) = 0.2 + 0.6$$

$$= 0.8$$

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