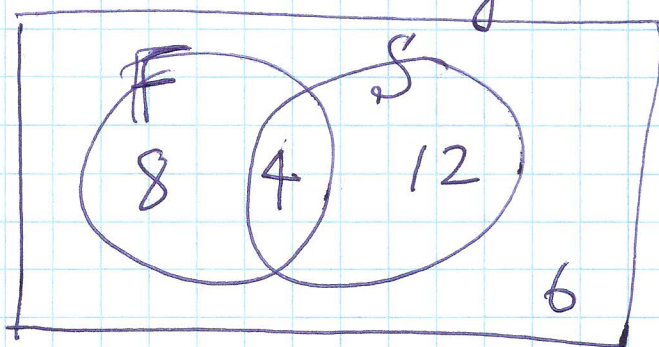


8-31 practice Key SL Math

①



$$\begin{array}{r} 12 \\ + 16 \\ \hline 28 \end{array} \quad \begin{array}{r} 30 \\ - 6 \\ \hline 24 \end{array} \quad \begin{array}{r} 28 \\ - 24 \\ \hline 4 \end{array}$$

(a) $P(F' \cap S') = \frac{6}{30}$

(b) $P(F \cap S) = \frac{4}{30}$

(c) $P(F \cup S) = \frac{8}{30} + \frac{4}{30} + \frac{12}{30} = \frac{24}{30}$

(d) $P(F' \cap S) = \frac{12}{30}$

② (a) $P(A \cap B)' = 1 - P(A \cap B) = 1 - \frac{1}{6} = \frac{5}{6}$

(b) $P(B)$

use the addition rule: $P(A \cup B) = P(A) + P(B) - P(A \cap B)$

$$\frac{7}{12} = \frac{1}{2} + P(B) - \frac{1}{6}$$

$$\frac{7}{12} = \frac{4}{12} + P(B)$$

$$\frac{3}{12} = P(B)$$

(c) $P(B') = 1 - P(B)$
 $= 1 - \frac{1}{4} = \frac{3}{4}$

