

(45) Each small Battle

$$.8 \times .8 \times .8 = .512$$

one Big Battle = .6 ← Better option

$$(46) P(12 work) = (.95)^{12} = .504$$

$$(48) (a) P(A) = .44 \text{ B/C}$$

$$\frac{7317 \text{ male}}{16639 \text{ total}}$$

A = male

B = 25+

$$(b) P(B) = \frac{3494 + 2630}{16639} = \frac{6124}{16639} = .3681$$

$$(c) P(A \text{ and } B) = \frac{1589 + 970}{16639} = \frac{2559}{16639} = .1538$$

not indep.

$$\text{B/C } P(A)P(B) = .1619 \leftarrow \text{not} =$$

$$(51) P(\text{Live}) = .2^8 \quad P(\text{NOT live}) = (1 - .2^8)$$

$$(1 - .2)^5 = (.8)^5 = .3277$$

$$(b) (.92)^5 = .6591$$

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$$(37) 1 - (.49 + .27 + .20) = .04 \text{ must add to } 1$$

$$(b) P(O \text{ or } B) = P(O) + P(B) \\ .49 + .20 = .69$$

$$(39) P(C \text{ or } can) = P(C) + P(can) \\ = .45 + .22 = .67$$

$$P(\text{other}) = 1 - .67 = .33$$

$$(40) 1 - (.12 + .61) \\ 1 - (.73) = .27 \text{ must add to } 1$$

$$P(\text{at least}) = P(\text{more}) + P(\text{fair}) \\ .12 + .61 = .73$$

$$(44) (a) P(D) = .301 + .176 + .125 = .602$$

$$(b) P(B \cup D) = P(B) + P(D) \\ .222 + .602 = .824$$

$$(c) P(D^c) = 1 - .602 = .398$$

$$(d) P(C \cap D) = P(1 \text{ or } 3) \\ P(1) + P(3) = .301 + .125 = .426$$

$$(e) P(B \cap C) = P(7, 9) \\ P(7) + P(9) = .058 + .046 = .104$$