

Ex. A

① Diff in mean =  $422 - 412 = 10$

②  $SE = \sqrt{\frac{(114)^2}{82} + \frac{(128)^2}{343}} = 1.44$

③  $t = \frac{10}{1.44} = 6.94$

④  $6.94 < 1.96$

Ex. B

$$(1) \text{ Diff in mean} = 4.02 - 3.97 = 0.05$$

$$(2) SE = \sqrt{\frac{(0.92)^2}{438} + \frac{(0.49)^2}{463}} = 0.6$$

$$(3) t = \frac{0.05}{0.6} = 0.083$$

$$(4) 0.083 < 1.96$$

Ex C

① Diff in mean =  $495 - 478 = 17$

②  $SE = \sqrt{\frac{(177)^2}{127} + \frac{(103)^2}{343}} = 0.88$

③  $t = \frac{1.7}{0.88} = 1.93$

④  $1.93 < 1.96$