

- ① a) 0.7887
b) 0.0062
c) 0.1056

Use the
"area from a value"
function on the
online calculator.

- ② a) 85.548
b) 61.936

Use the
"value from an area"
function on the
online calculator.

③ a)
$$\mu = \bar{x} \pm z \frac{\sigma}{\sqrt{n}}$$
$$\mu = 75 \pm 1.960 \left(\frac{7.5}{\sqrt{50}} \right)$$
$$\mu = 75 \pm 2.1$$

or $72.9 \leq \mu \leq 77.1$

or $73 \leq \mu \leq 77$

b)
$$\mu = \bar{x} \pm z \frac{\sigma}{\sqrt{n}}$$
$$\mu = 75 \pm 2.576 \left(\frac{7.5}{\sqrt{50}} \right)$$

$$\mu = 75 \pm 2.7$$

or $72.3 \leq \mu \leq 77.7$

or $72 \leq \mu \leq 78$

- ④
- a) Systematic Random Sample
 - b) Simple Random Sample
 - c) Stratified Random Sample
 - d) Cluster Sample

- ⑤
- a) Observational Study
 - b) Experimental Study