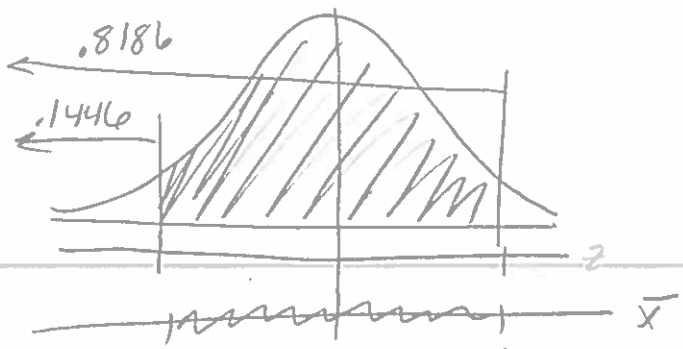
Corrections:

#8 $P(75 < \bar{x} < 80)$




$$z_1 = \frac{75 - 77.7}{8.8/\sqrt{12}}$$

TABLE VALUES

$= -1.06 \rightarrow .1446$

$$z_2 = \frac{80 - 77.7}{8.8/\sqrt{12}}$$

$= 0.91 \rightarrow .8186$

So $P(75 < \bar{x} < 80) = .8186 - .1446$

$= \boxed{.6740}$

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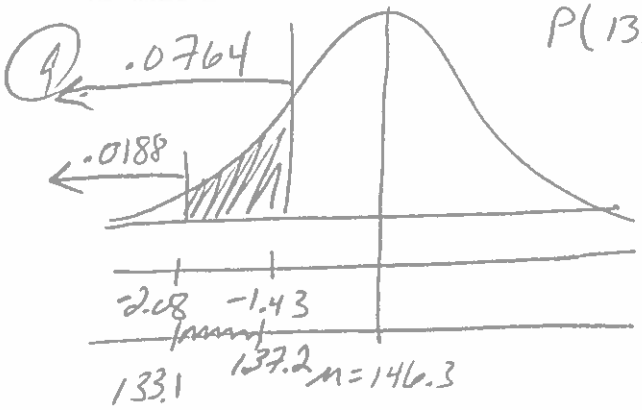
#9




$P(133.1 < \bar{x} < 137.2)$

$$z_1 = \frac{133.1 - 146.3}{46.2/\sqrt{53}}$$

TABLE VALUES

$= -2.08 \rightarrow .0188$

$$z_2 = \frac{137.2 - 146.3}{46.2/\sqrt{53}}$$

$= -1.43 \rightarrow .0764$

So $P(133.1 < \bar{x} < 137.2) =$

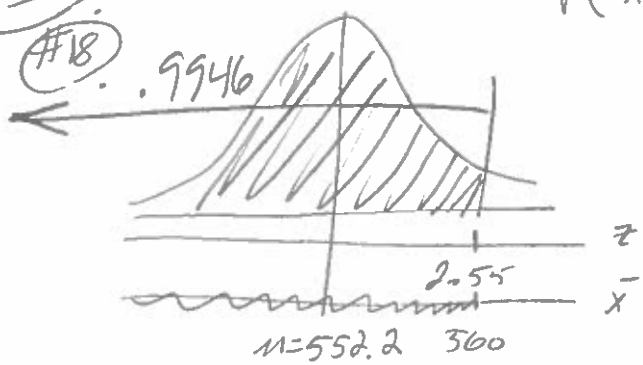
$= .0764 - .0188$

$= \boxed{.0576}$

III

#18

$P(\bar{x} < 560)$




$$z = \frac{\bar{x} - \mu}{\sigma/\sqrt{n}}$$

$$= \frac{560 - 552.2}{32.1/\sqrt{110}}$$

$= 2.55$ → TABLE VALUE → .9946

so $P(\bar{x} < 560) = .9946$

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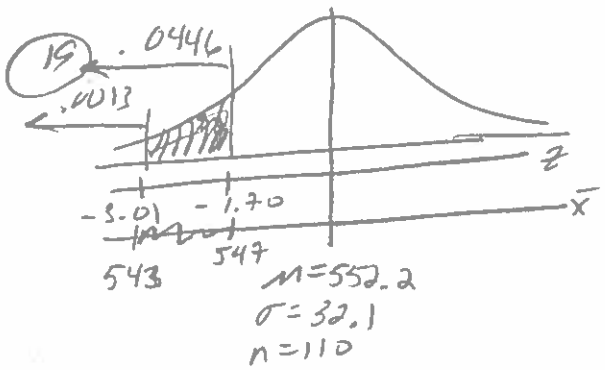
19




$P(543 < \bar{x} < 547)$

$$z_1 = \frac{543 - 552.2}{32.1/\sqrt{110}}$$

$= -3.01$ → TABLE VALUES → .0013

$$z_2 = \frac{547 - 552.2}{32.1/\sqrt{110}}$$

$= -1.70 \Longrightarrow .0446$

so $P(543 < \bar{x} < 547) = .0446 - .0013 = .0433$

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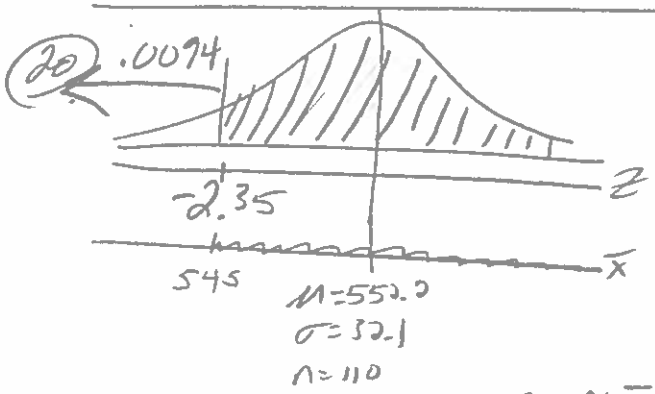
20




$P(\bar{x} > 545)$

$$z = \frac{545 - 552.2}{32.1/\sqrt{110}}$$

$= -2.35$ → TABLE VALUE → .0094

so $P(\bar{x} > 545) = 1 - .0094 = .9906$

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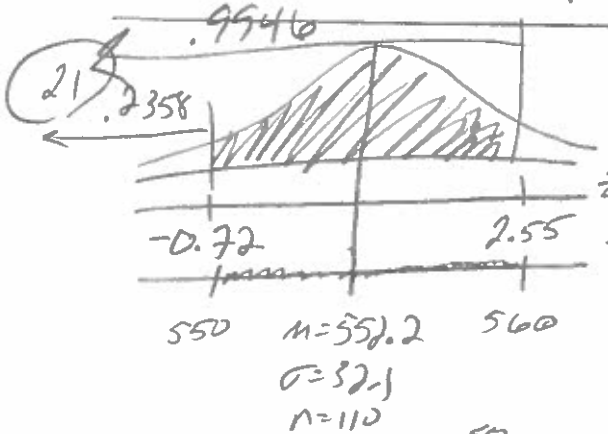
21




$P(550 < \bar{x} < 560)$

$$z_1 = \frac{550 - 552.2}{32.1/\sqrt{110}}$$

$= -0.72$ → TABLE VALUES → .2358

$$z_2 = \frac{560 - 552.2}{32.1/\sqrt{110}}$$

$= 2.55$ → .9946

so $P(550 < \bar{x} < 560) = .9946 - .2358 = .7588$