

Unit #1 Lesson #5 PW: Calculate Area
Using z-scores

① 100% ② 50% 50% ③ 68% 95% 99% Empirical

④ a) $P(0 < z < 0.75) = .273$

b) $P(-0.35 < z < 0) = .1368$

c) $P(z > 0.23) = .4090$

d) $P(z < -0.48) = .3156$

e) $P(0.79 < z < 1.28) = .1145$

f) $P(-0.96 < z < -0.36) = .191$

g) $P(-1.83 < z < -1.56) = .026$

h) $P(-1.12 < z < 0.24) = 0.463$

i) $P(z < 2.11) = .983$

j) $P(z > -1.92) = .973$

k) $P(z > 1.92) + P(z < -0.44) = .357$

OR $\underline{1} - P(-.44 < z < 1.92) = .357$

⑤ a) .249 f) .071

b) .391 g) .918

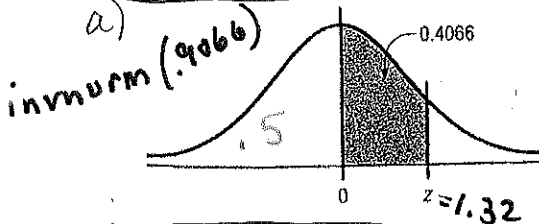
c) .002 h) .922

d) .038

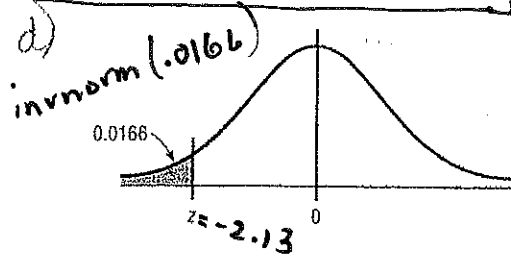
e) .952

6) Find the z score that corresponds to the given area.

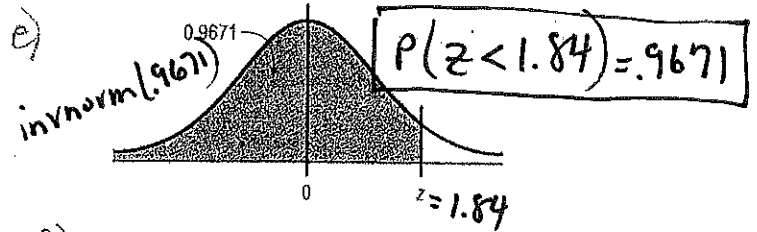
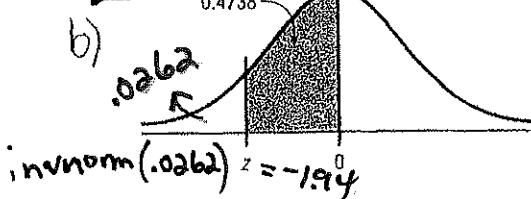
$$P(0 < z < 1.32) = .4066$$



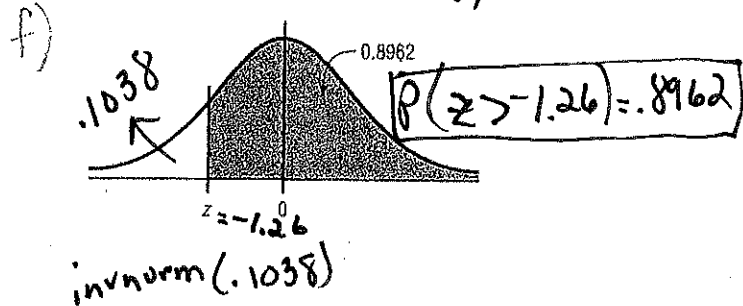
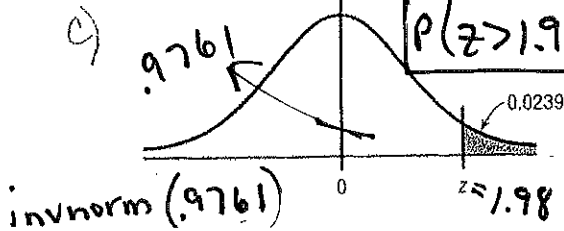
$$P(z < -2.13) = .0166$$



$$P(-1.94 < z < 0) = .4738$$

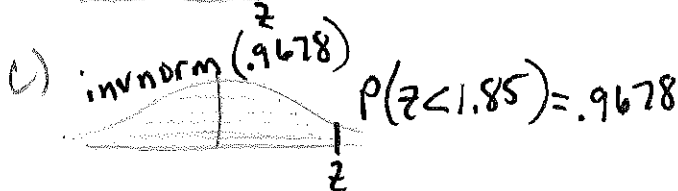
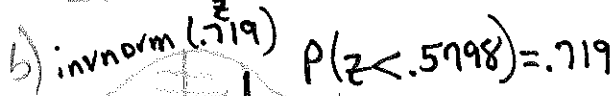
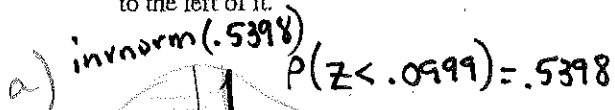


$$P(z > 1.98) = .0239$$



7) Find the z value to the right of the mean so that

- 53.98% of the area under the distribution curve lies to the left of it.
- 71.90% of the area under the distribution curve lies to the left of it.
- 96.78% of the area under the distribution curve lies to the left of it.



8) Find the z value to the left of the mean so that

- 98.87% of the area under the distribution curve lies to the right of it.
- 82.12% of the area under the distribution curve lies to the right of it.
- 60.64% of the area under the distribution curve lies to the right of it.

