

QUIZ 2 REVIEW ANSWERS

3. $Z = \frac{X-M}{SD}$ $M=79$ $SD=12$

(a) $\frac{91-79}{12} = \frac{12}{12} = \boxed{1}$

(b) $\frac{68-79}{12} = \frac{-11}{12} = -.916 \approx \boxed{-.92}$

(c) $\frac{103-79}{12} = \frac{24}{12} = \boxed{2}$

4. (a) $Z = \frac{X-M}{SD}$ (IQ scores) $M=100$ $SD=15$

(raw items) $M=231$ $SD=41$

$\frac{107-100}{15} = \frac{7}{15} = .47$

(b) 184.67

(c) 231

$X = zSD + M$

$X = (.47)(41) + 231$

$X = 19.27 + 231 = \boxed{250.27}$

5. (a) Z-score table $\rightarrow Z=1.5 = 43.32\%$

$50\% + 43.32\% = \boxed{93.32\%}$



(b) 6.68% (c) 6.68% (d) 43.32% (e) 1.79% (f) 98.21% (g) 32.64% (h) 3.75% (i) 4.65%

6. $Z = \frac{X-M}{SD}$ $M=15$ $SD=5$

(a) $Z = \frac{16-15}{5} = \frac{1}{5} = .2 \rightarrow$ z-score table $Z=.2 = \boxed{42.07\%}$

(b) 34.46% (c) 27.43% (d) 72.57% (e) 42.07%

7. $X = zSD + M$ $M=15$ $SD=5$

(a) Table B to find Z-score 40th percentile = $-.25$

$X = (-.25)(5) + 15$

$\boxed{13.75} = -1.25 + 15$

(b) $X = (.25)(5) + 15$

$\boxed{16.25} = 1.25 + 15$

(c) $X = (1.00)(5) + 15$

$\boxed{20} = 5 + 15$

8. $40/400 = .10$ $\boxed{p=.10}$

9. 7 to 1

10. $z = \frac{X - M}{SD}$ $M = 35$ $SD = 4$ $X = 36$ $X = 31$

$z = \frac{36 - 35}{4} = \frac{1}{4} = .25$ \nearrow z-score table
9.87%

$z = \frac{31 - 35}{4} = \frac{-4}{4} = -1$ \nearrow z-score table
34.13%

$50 - 9.87 = 40.13 \approx 40/100 = .40$

$50 - 34.13 = 15.87 \approx 16/100 = .16$

$P = .40 + .16$

$P = .56$

