75/10

Student Name: Ehdaa Dahdah   Student Number 1190545   Sec: ....

Question # 1 If Z has a standard normal probability distribution, find the following:

5

I) $P(Z < 1.66) =$ 0.9515

II) $P(Z < 1) =$ 0.8413

III) $P(Z > 1.22) =$ ..1.. $- P(Z < 1.22)$ .... = ..1. $- 0.8888$ = 0.1112

IV) $P(Z < -1.23) =$ $P(Z > 1.23)$ .... = ..1. $- P(Z < 1.23) = 1 - 0.8907$ = 0.1093

V)   The value of Z the area to the left of which is 0.9222 is : ..1.. 42

Question # 2

The mean cost for a training programs is \$400 (*USA Today*, September 12, 1991). Assume the training $m = 400$
program cost has a **normal probability distribution** with a **standard deviation** of \$50. Answer the 6
following questions.

a. What is the probability that a training program will cost at least \$450?

2.5

$$Z = \frac{X - M}{6} = \frac{450 - 400}{50} = \frac{50}{50} = 1 \qquad \boxed{Z = 1}$$

$$= P(Z > 1)$$

$$= 1 - P(Z < 1)$$

$$= 1 - 0.8413$$

$$\boxed{= 0.1587}$$

b. What is the cost above which is the most expensive 10% of the training programs?

$P(10\%)$