

## Normal Curve 1 - Practice

Name \_\_\_\_\_

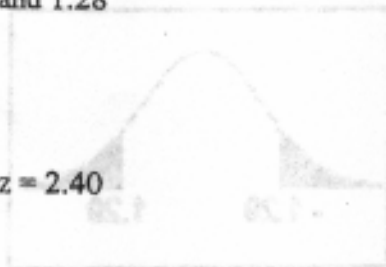
For 1 & 2, draw a normal curve and fill in the values for the mean and  $\pm 1, 2,$  and  $3$  standard deviations;

1. **Dogs Life Span** ♦ The life span of a dog is normally distributed with a mean of 12.5 years and a standard deviation of 2 years. Estimate the probability that a dog's life span is between 10.5 and 14.5 years.

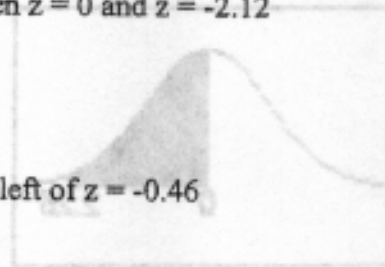
2. **Light Bulb Life Span** ♦ The life span of a certain type of light bulb is normally distributed with a mean of 5000 hours and a standard deviation of 150 hours. Estimate the probability that this type of light bulb has a life span is between 4850 and 5300 hours.

**Finding Area in Exercises 3-8, find the indicated area under the standard normal curve.** (Hint: Draw a picture)

3. Between  $z = 0$  and  $1.28$



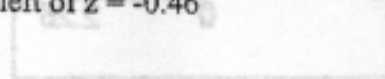
4. Between  $z = 0$  and  $z = -2.12$



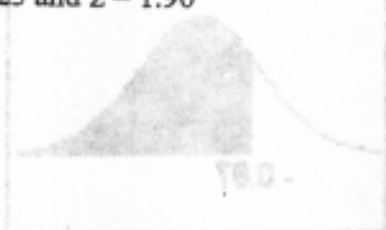
5. To the right of  $z = 2.40$



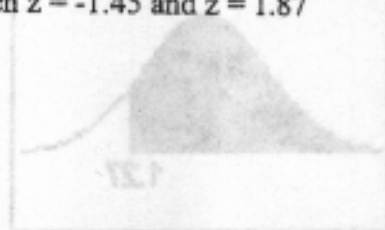
6. To the left of  $z = -0.46$



7. Between  $z = 1.23$  and  $z = 1.90$



8. Between  $z = -1.45$  and  $z = 1.87$



**Finding Probabilities** In Exercises 9-14, find the probabilities for each using the standard normal distribution.

9.  $P(-1.25 < z < 0)$

12.  $P(z > -0.5)$

10.  $P(z > 2.53)$

13.  $P(-2.05 < z < 1.85)$

11.  $P(z < -1.25)$

14.  $P(z < -1.54 \text{ or } z > 1.54)$