Name: _____ Date: _____

Normal Distributions - Medium

Find the z-score: $z = (x - \mu) / \sigma$. Round to the nearest hundredth.

1. Adult heights: mean 68 inches, standard deviation 3 inches. Find the z-score of 59 inches.

2. Adult heights: mean 64 inches, standard deviation 4 inches. Find the z-score of 69 inches.

3. Adult heights: mean 68 inches, standard deviation 4 inches. Find the z-score of 64 inches.

4. Cereal box weights: mean 474 grams, standard deviation 9 grams. Find the z-score of 479 grams.

5. Battery lifetimes: mean 47 hours, standard deviation 9 hours. Find the z-score of 24 hours.

6. Cereal box weights: mean 423 grams, standard deviation 10 grams. Find the z-score of 450 grams.

Name: _____ Date: _____

Fresh Math

Normal Distributions - Medium

Find the z-score: $z = (x - \mu) / \sigma$. Round to the nearest hundredth.

7. Commute times: mean 22 minutes, standard deviation 3 minutes. Find the z-score of 26 minutes.

8. Newborn weights: mean 121 ounces, standard deviation 11 ounces. Find the z-score of 99 ounces.

9. Cereal box weights: mean 474 grams, standard deviation 10 grams. Find the z-score of 459 grams.

10. Battery lifetimes: mean 89 hours, standard deviation 14 hours. Find the z-score of 128 hours.

11. Test scores: mean 71 points, standard deviation 9 points. Find the z-score of 88 points.

12. Newborn weights: mean 115 ounces, standard deviation 10 ounces. Find the z-score of 102 ounces.

Name: _____ Date: _____

Fresh Math

Normal Distributions - Medium

Find the z-score: $z = (x - \mu) / \sigma$. Round to the nearest hundredth.

13. Test scores: mean 83 points, standard deviation 7 points. Find the z-score of 85 points.

14. Cereal box weights: mean 491 grams, standard deviation 12 grams. Find the z-score of 477 grams.

15. Battery lifetimes: mean 103 hours, standard deviation 9 hours. Find the z-score of 78 hours.

16. Cereal box weights: mean 453 grams, standard deviation 8 grams. Find the z-score of 462 grams.

Normal Distributions - Medium - Answer Key

1. Adult heights: mean 68 inches, standard deviation 3 inches. Find the z-score of 59 inches.

   $z = -3$

2. Adult heights: mean 64 inches, standard deviation 4 inches. Find the z-score of 69 inches.

   $z = 1.25$

3. Adult heights: mean 68 inches, standard deviation 4 inches. Find the z-score of 64 inches.

   $z = -1$

4. Cereal box weights: mean 474 grams, standard deviation 9 grams. Find the z-score of 479 grams.

   $z \approx 0.56$

5. Battery lifetimes: mean 47 hours, standard deviation 9 hours. Find the z-score of 24 hours.

   $z \approx -2.56$

6. Cereal box weights: mean 423 grams, standard deviation 10 grams. Find the z-score of 450 grams.

   $z = 2.7$

Normal Distributions - Medium - Answer Key

7. Commute times: mean 22 minutes, standard deviation 3 minutes. Find the z-score of 26 minutes.

   $z \approx 1.33$

8. Newborn weights: mean 121 ounces, standard deviation 11 ounces. Find the z-score of 99 ounces.

   $z = -2$

9. Cereal box weights: mean 474 grams, standard deviation 10 grams. Find the z-score of 459 grams.

   $z = -1.5$

10. Battery lifetimes: mean 89 hours, standard deviation 14 hours. Find the z-score of 128 hours.

    $z \approx 2.79$

11. Test scores: mean 71 points, standard deviation 9 points. Find the z-score of 88 points.

    $z \approx 1.89$

12. Newborn weights: mean 115 ounces, standard deviation 10 ounces. Find the z-score of 102 ounces.

    $z = -1.3$

Normal Distributions - Medium - Answer Key

13. Test scores: mean 83 points, standard deviation 7 points. Find the z-score of 85 points.

    $z \approx 0.29$

14. Cereal box weights: mean 491 grams, standard deviation 12 grams. Find the z-score of 477 grams.

    $z \approx -1.17$

15. Battery lifetimes: mean 103 hours, standard deviation 9 hours. Find the z-score of 78 hours.

    $z \approx -2.78$

16. Cereal box weights: mean 453 grams, standard deviation 8 grams. Find the z-score of 462 grams.

    $z \approx 1.12$