

## Self-Check 6.1

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Name: \_\_\_\_\_ Date: \_\_\_\_\_ Row: \_\_\_\_\_ **Self-Check 6.1**

1. What is the z-score of  $x = 9$ , if it is 1.5 standard deviations to the left of the mean?
2. Suppose  $X \sim N(2, 3)$ . What value of  $x$  has a z-score of  $-0.67$ ?
3. Suppose  $X \sim N(4, 2)$ . What value of  $x$  is 1.5 standard deviations to the left of the mean?
4. Suppose  $X \sim N(-1, 2)$ . What is the z-score of  $x = 2$ ?
5. In a normal distribution,  $x = -2$  and  $z = 6$ . This tells you that  $x = -2$  is \_\_\_\_ standard deviations to the \_\_\_\_ (right or left) of the mean.
6. The tallest living man at the time of this writing is Sultan Kosan, who has a height of 251cm. The shortest living man is Chandra Bahadur Dangi, who has a height of 54.6 cm. Heights of men have a mean of 174.12cm and a standard deviation of 7.10 cm. Which of these two men has the height that is more extreme?
7. Blood platelet counts of women have a normal distribution with a mean of 255.1 and a standard deviation of 65.4. Use the empirical rule to approximate the following.
  1. Approximately what percentage of women have platelet counts between 124.3 and 385.9?
  2. Approximately what percentage of women have platelet counts between 189.7 and 385.9?
  3. About 99.7% of women have platelet counts between what two amounts?

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