Name _____ Score _____ Teacher _____ Date _____

Z-Scores and Standardized Values

Use z = (x - mean) / standard deviation. The given standard deviation is positive. Explain whether each value is above or below its mean; no normal-distribution assumption is needed.

1. **Data set A: x = 52.75, mean = 48, SD = 9.5 points. Data set B: x = 23, mean = 36, SD = 6.5 centimeters. Which value has the greater standardized position?**

Set	x	mean	SD	unit
A	52.75	48	9.5	points
B	23	36	6.5	centimeters

2. **Data set A measurement has mean 89 points and standard deviation 11 points. Find x when z = 0.5.**

Set	x	mean	SD	unit
A	?	89	11	points

Name _____ Score _____ Teacher _____ Date _____

Z-Scores and Standardized Values

Use z = (x - mean) / standard deviation. The given standard deviation is positive. Explain whether each value is above or below its mean; no normal-distribution assumption is needed.

3. **Data set A measurement has mean 86.5 minutes and standard deviation 9.5 minutes. Find the z-score for 81.75 minutes.**

Set	x	mean	SD	unit
A	81.75	86.5	9.5	minutes

4. **Data set A: x = 71, mean = 57.5, SD = 13.5 degrees. Data set B: x = 29.75, mean = 45.5, SD = 10.5 minutes. Which value has the greater standardized position?**

Set	x	mean	SD	unit
A	71	57.5	13.5	degrees
B	29.75	45.5	10.5	minutes

State the convention and include units in the final answer.

Name _____ Score _____ Teacher _____ Date _____

Z-Scores and Standardized Values

Use z = (x - mean) / standard deviation. The given standard deviation is positive. Explain whether each value is above or below its mean; no normal-distribution assumption is needed.

5. **Data set A measurement has mean 51 points and standard deviation 10 points. Find x when z = 0.5.**

Set	x	mean	SD	unit
A	?	51	10	points

6. **Data set A measurement has mean 29 points and standard deviation 2.5 points. Find the z-score for 30.25 points.**

Set	x	mean	SD	unit
A	30.25	29	2.5	points

State the convention and include units in the final answer.