Name :

Inequalities

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5. The table shows the number of different types of roller coasters in the United States. An amusement park wants to build a new roller coaster. They will only build a roller coaster if there are less than 10 of that type in the United States. Use the inequality $r < 10$, where r is the number of a certain type of roller coaster, to determine which type(s) can be built. (Example 5)

Type	Number
Sit down (steel)	530
Sit down (wood)	112
Inverted	43
Flying	10
Stand up	8
Suspended	5

H.O.T. Problems Higher Order Thinking

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9. MP **Reason Inductively** State three numbers that are solutions to the inequality $x + 1 \leq 5$. _____ , , , , ,

11. MP **Reason Abstractly** If $a > b$ and $b > c$, what is true about the relationship between a and c? Explain your reasoning.

a c

13. MP **Persevere with Problems** Analyze the relationship between the inequalities in each pair of inequalities below. Then write the integers that are solutions to each pair of inequalities.

a. $y > 4$ and $y \leq 6$ _____ ,

b. $x \geq -3$ and $x < 0$ _____ , ,

c. $m < 5$ and $m > 3$ _____

d. $r < -1$ and $r > 0$ _____

LIVEWORKSHEETS