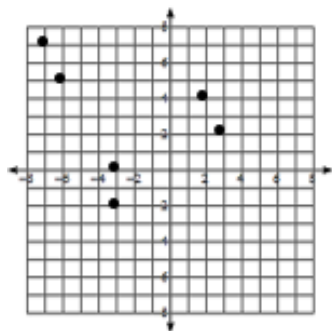


14-Functions and Relations

1. What is a relation? _____
2. What is a function? _____
3. What is an input? _____ What variable do we usually use to represent our input? _____
4. What is an output? _____ What variable do we usually use to represent our output? _____
5. What does domain mean? _____
6. What does range mean? _____

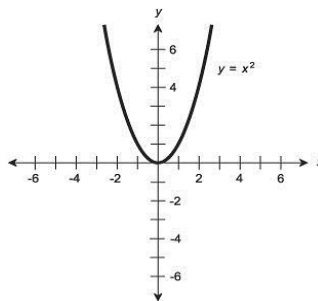
Answer the questions about the given relation.

<p style="text-align: center;">$\{(2, 2), (3, 3), (6, 5), (3, 1)\}$</p> <p>7. State the domain of the relation: _____</p> <p>8. State the range of the relation: _____</p> <p>9. Is the relation a function: Yes or No</p> <p>10. Explain why or why not:</p>	<p style="text-align: center;">$\{(2, 20), (1, -3), (2, 18), (5, 10), (6, 3)\}$</p> <p>11. State the domain of the relation: _____</p> <p>12. State the range of the relation: _____</p> <p>13. Is the relation a function: Yes or No</p> <p>14. Explain why or why not:</p>																												
<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">Input</th> <th style="padding: 5px;">Output</th> </tr> </thead> <tbody> <tr><td style="padding: 5px;">-3</td><td style="padding: 5px;">1</td></tr> <tr><td style="padding: 5px;">-5</td><td style="padding: 5px;">3</td></tr> <tr><td style="padding: 5px;">-7</td><td style="padding: 5px;">9</td></tr> <tr><td style="padding: 5px;">1</td><td style="padding: 5px;">8</td></tr> <tr><td style="padding: 5px;">7</td><td style="padding: 5px;">3</td></tr> <tr><td style="padding: 5px;">-5</td><td style="padding: 5px;">10</td></tr> </tbody> </table> <p>15. State the domain of the relation: _____</p> <p>16. State the range of the relation: _____</p> <p>17. Is the relation a function: Yes or No</p> <p>18. Explain why or why not:</p>	Input	Output	-3	1	-5	3	-7	9	1	8	7	3	-5	10	<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">Input</th> <th style="padding: 5px;">Output</th> </tr> </thead> <tbody> <tr><td style="padding: 5px;">0</td><td style="padding: 5px;">10</td></tr> <tr><td style="padding: 5px;">1</td><td style="padding: 5px;">8</td></tr> <tr><td style="padding: 5px;">2</td><td style="padding: 5px;">6</td></tr> <tr><td style="padding: 5px;">3</td><td style="padding: 5px;">4</td></tr> <tr><td style="padding: 5px;">4</td><td style="padding: 5px;">4</td></tr> <tr><td style="padding: 5px;">5</td><td style="padding: 5px;">12</td></tr> </tbody> </table> <p>19. State the domain of the relation: _____</p> <p>20. State the range of the relation: _____</p> <p>21. Is the relation a function: Yes or No</p> <p>22. Explain why or why not:</p>	Input	Output	0	10	1	8	2	6	3	4	4	4	5	12
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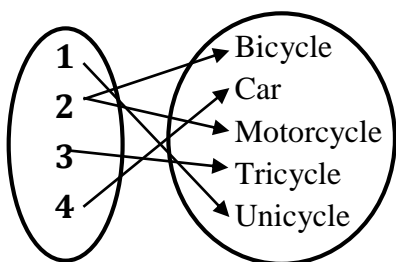
23. Is the relation a function: **Yes** or **No**

24. Explain why or why not:



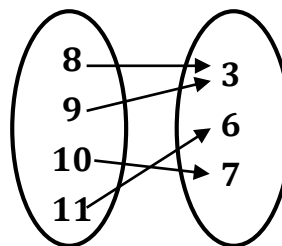
25. Is the relation a function: **Yes** or **No**

26. Explain why or why not:



27. Is the relation a function: **Yes** or **No**

28. Explain why or why not:



29. Is the relation a function: **Yes** or **No**

30. Explain why or why not:

When students audition for choir, Mrs. Thomson puts each student into one section: Soprano, Alto, Tenor, or Bass.

31. Is the relation a function: **Yes** or **No**

32. Explain why or why not:

When you put in a person into the pet machine, it tells you a pet they have.

33. Is the relation a function: **Yes** or **No**

34. Explain why or why not: