

Algebra: Skill 5 - 18D

Functions

Example

Joey makes \$3 an hour washing cars.
How much does he make in 5 hours?

Number of hours	1	2	3	4	5
Money earned	3	6	9	12	15

You can use a table to show the relationship between how many hours Joey works and how much he earns. The amount he earns is equal to 3 times the number of hours that he works. This relationship between the amount he earns and the number of hours he works is a function. The table above is a function table.

You can use an equation to show the above function.

Step 1	Step 2	Step 3
<p>Define the variables.</p> <p>let x equal the number of hours Joey works</p> <p>let y equal the amount Joey earns</p>	<p>Write an equation.</p> <p>y (the amount he earns) = 3 times x (the number of hours he works)</p> <p style="margin-left: 100px;">$y = 3x$</p>	<p>How much does Joey earn in 5 hours?</p> <p style="margin-left: 100px;">$y = 3$ times 5.</p> <p style="margin-left: 100px;">$y = 15$</p>

Number of hours = x	1	2	3	4	5
Money earned = y	3	6	9	12	15

Put the variables from the equation in the function table.

x	1	2	3	4	5
y	3	6	9	12	15

Directions: Use each equation to complete each function table.

<p>1. $y = 2x$ This function table is partially completed for you.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center;">x</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> <tr> <td style="text-align: center;">y</td> <td style="text-align: center;">2</td> <td style="text-align: center;">4</td> <td></td> <td></td> <td></td> </tr> </table>	x	1	2	3	4	5	y	2	4				<p>2. $y = 3x$</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center;">x</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> <tr> <td style="text-align: center;">y</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	x	1	2	3	4	5	y					
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Directions: Use each equation to complete each function table.

5. $b = 2a - 2$

a	2	4	6	8	10
b					

6. $b = 5a + 4$

a	3	4	5	6	7
b					

7. $b = 6a$

a	0	1	2	3	4
b					

8. $b = 4a - 8$

a	2	3	4	5	6
b					

9. $b = 5a + 10$

a	3	6	9	12	15
b					

10. $b = 2a - 12$

a	6	8	10	12	14
b					

11. $q = 3p + 7$

p	4	5	6	7	8
q					

12. $q = 7p - 7$

p	1	2	3	4	5
q					

13. $q = 10p - 14$

p	4	8	12	16	20
q					

14. $q = 2p + 15$

p	0	1	2	3	4
q					

15. $q = 2 + 5p$

p	1	2	3	4	5
q					

16. $q = 5 + 6p$

p	4	5	6	7	8
q					

Answer Key: Grade 5: Skill 18D

<p>1. $y = 2x$</p> <table border="1"> <tr><td>x</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td>y</td><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	x	1	2	3	4	5	y	2	4	6	8	10	<p>2. $y = 3x$</p> <table border="1"> <tr><td>x</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr><td>y</td><td>3</td><td>6</td><td>9</td><td>12</td><td>15</td></tr> </table>	x	1	2	3	4	5	y	3	6	9	12	15	<p>3. $y = 2x$</p> <table border="1"> <tr><td>x</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> <tr><td>y</td><td>10</td><td>12</td><td>14</td><td>16</td><td>18</td></tr> </table>	x	5	6	7	8	9	y	10	12	14	16	18	<p>4. $y = 2x + 2$</p> <table border="1"> <tr><td>x</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>y</td><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	x	0	1	2	3	4	y	2	4	6	8	10
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