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
Define the variables. let x equal the number of hours Joey works let y equal the amount Joey earns	Write an equation. y (the amount he earns) = 3 times x (the number of hours he works) $y = 3x$	How much does Joey earn in 5 hours? y = 3 times 5. y = 15

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.

1. $y = 2x$ This function table is partially completed for you.

x	1	2	3	4	5
y	2	4			

2. $y = 3x$

x	1	2	3	4	5
y					

3. $y = 2x$

x	5	6	7	8	9
y					

4. $y = 2x + 2$

x	0	1	2	3	4
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

1. $y = 2x$

x	1	2	3	4	5
y	2	4	6	8	10

2. $y = 3x$

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

3. $y = 2x$

x	5	6	7	8	9
y	10	12	14	16	18

4. $y = 2x + 2$

x	0	1	2	3	4
y	2	4	6	8	10

5. $b = 2a - 2$

a	2	4	6	8	10
b	2	6	10	14	18

6. $b = 5a + 4$

a	3	4	5	6	7
b	19	24	29	34	39

7. $b = 6a$

a	0	1	2	3	4
b	0	6	12	18	24

8. $b = 4a - 8$

a	2	3	4	5	6
b	0	4	8	12	16

9. $b = 5a + 10$

a	3	6	9	12	15
b	25	40	55	70	85

10. $b = 2a - 12$

a	6	8	10	12	14
b	0	4	8	12	16

11. $q = 3p + 7$

p	4	5	6	7	8
q	19	22	25	28	31

12. $q = 7p - 7$

p	1	2	3	4	5
q	0	7	14	21	28

13. $q = 10p - 14$

p	4	8	12	16	20
q	26	66	106	146	186

14. $q = 2p + 15$

p	0	1	2	3	4
q	15	17	19	21	23

15. $q = 2 + 5p$

p	1	2	3	4	5
q	7	12	17	22	27

16. $q = 5 + 6p$

p	4	5	6	7	8
q	29	35	41	47	53