

**Unit: 5<sup>th</sup> – Coordinate Plane**  
**Lesson: 5.4.C – Numerical Patterns**  
**Problem Set 1**

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1 A	2 D	3 A	4 A
5 C	6 D	7 C	8 B
9 C	10 B	11 D	12 B
13 B	14 C	15 A	16 D
17 D	18 A	19 C	20 D
21 C	22 B	23 C	24 B
25 B	26 B	27 C	28 B
29 A	30 A	31 C	32 A



1. A pet store owner will order dog beds for his shop. The relationship between  $x$ , the number of boxes he will order, and  $y$ , the number of dog beds he will receive, can be represented by the equation  $y = 12x$ . Which table contains only values that represent the equation?

A. Dog Beds

Number of Boxes, $x$	Number of Dog Beds, $y$
3	36
6	72
9	108
15	180

B. Dog Beds

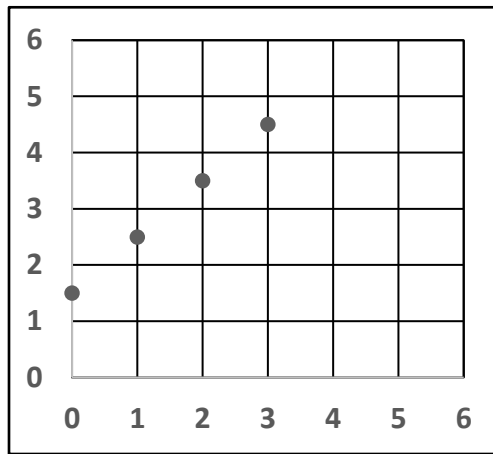
Number of Boxes, $x$	Number of Dog Beds, $y$
3	36
6	72
9	108
15	144

C. Dog Beds

Number of Boxes, $x$	Number of Dog Beds, $y$
2	14
6	18
10	22
14	26

D. Dog Beds

Number of Boxes, $x$	Number of Dog Beds, $y$
3	24
6	36
9	48
15	60



2. The graph shown represents the rule  $y = x + 1.5$ . Which table contains only values that represent the rule?

A.

$x$	0	1	2	3	9
$y$	0	1.5	3	4.5	6

B.

$x$	0	1	2	3	9
$y$	1.5	3	4.5	6	7.5

C.

$x$	0	1	2	3	9
$y$	0	1.5	3	4.5	13.5

D.

$x$	0	1	2	3	9
$y$	1.5	2.5	3.5	4.5	10.5

3. The equation  $y = 1.5x$  can be used to determine  $y$ , the number of cups of water needed to cook  $x$  cups of rice. Which table shows the relationship between  $x$  and  $y$ ?

Cooking Rice

A.

Number of Cups of rice, $x$	9	11	13	15
Number of cups of water, $y$	13.5	16.5	19.5	22.5

Cooking Rice

B.

Number of Cups of rice, $x$	10	12	14	16
Number of cups of water, $y$	11.5	13.5	15.5	17.5

Cooking Rice

C.

Number of Cups of rice, $x$	13	15	17	19
Number of cups of water, $y$	19.5	21	22.5	24

Cooking Rice

D.

Number of Cups of rice, $x$	14	16	18	20
Number of cups of water, $y$	14.5	16.5	18.5	20.5

4. The relationship between numbers in List X and List Y follows the rule  $y = x + 3.25$ . Which diagram shows this relationship?

A.

<u>List X</u>		<u>List Y</u>
29.1	→	32.35
34.1	→	37.35
39.1	→	42.35
44.1	→	47.35

C.

<u>List X</u>		<u>List Y</u>
29.1	→	31.15
34.1	→	36.15
39.1	→	41.15
44.1	→	46.15

B.

<u>List X</u>		<u>List Y</u>
31.15	→	33.35
33.2	→	36.4
35.25	→	35.45
37.3	→	39.5

D.

<u>List X</u>		<u>List Y</u>
31.15	→	34.15
36.15	→	39.15
41.15	→	44.15
46.15	→	49.15

5. Which table represents the equation  $y = 3x$ ?

A.

$x$	$y$
3	1
6	2
15	5
18	6

B.

$x$	$y$
1	1
3	3
5	5
7	7

C.

$x$	$y$
1	3
3	9
4	12
7	21

D.

$x$	$y$
1	3
4	9
6	12
7	18

6. Wanda is ordering powdered bat toes for the Witch Supply Store. The relationship between  $x$ , the number of boxes she will order, and  $y$ , the number of ounces of powdered toes she will receive, can be represented by the equation  $y = 8x$ . Which table contains only values that represent the equation?

A.

**Powdered Bat Toes**

Number of Boxes, $x$	Number of ounces, $y$
3	11
6	14
9	17
15	23

B.

**Powdered Bat Toes**

Number of Boxes, $x$	Number of ounces, $y$
3	24
6	32
9	40
15	48

C.

**Powdered Bat Toes**

Number of Boxes, $x$	Number of ounces, $y$
2	12
6	36
10	60
14	84

D.

**Powdered Bat Toes**

Number of Boxes, $x$	Number of ounces, $y$
3	24
6	48
9	72
15	120



7. Which table of values does NOT represent  $y = x + 4.5$ ?

A.

$x$	$y$
1	5.5
2	6.5
3	7.5
5	9.5

B.

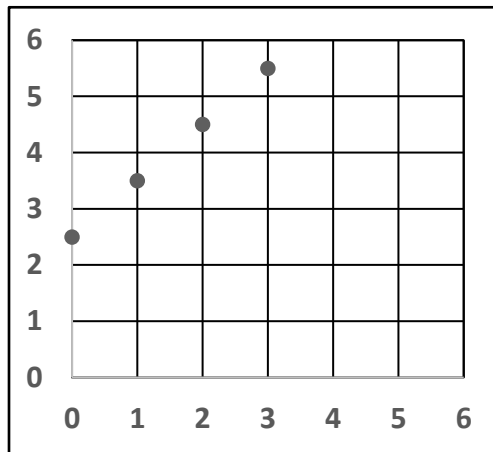
$x$	$y$
2	6.5
4	8.5
5	9.5
6	10.5

C.

$x$	$y$
4	18.0
5	22.5
6	27.0
9	40.5

D.

$x$	$y$
1	5.5
3	7.5
7	11.5
9	13.5



8. The graph shown represents the rule  $y = x + 2.5$ . Which table contains only values that represent the rule?

A.

$x$	0	1	2	3	7
$y$	0	2.5	4.5	5.5	9.5

B.

$x$	0	1	2	3	7
$y$	2.5	3.5	4.5	5.5	9.5

C.

$x$	0	1	2	3	7
$y$	0	1.5	3	4.5	8.5

D.

$x$	0	1	2	3	7
$y$	1.5	2.5	3.5	4.5	10.5

**Unit: 5<sup>th</sup> – Coordinate Plane**  
**Lesson: 5.4.C – Numerical Patterns**  
**Problem Set 2**

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1 A	2 D	3 A	4 A
5 C	6 D	7 C	8 B
9 C	10 B	11 D	12 B
13 B	14 C	15 A	16 D
17 D	18 A	19 C	20 D
21 C	22 B	23 C	24 B
25 B	26 B	27 C	28 B
29 A	30 A	31 C	32 A



9. The equation  $y = 4.5x$  can be used to determine  $y$ , the number of pounds of rose petals needed to mix up,  $x$ , each batch of Wanda the Witch's famous Love potion. Which table shows the relationship between  $x$  and  $y$ ?

Mixing Love Potion

A.

Number of batches of potion, $x$	9	11	13	15
Number of pounds of rose petals, $y$	4.5	9	13.5	18

Mixing Love Potion

B.

Number of batches of potion, $x$	10	12	14	16
Number of pounds of rose petals, $y$	40	48	56	64

Mixing Love Potion

C.

Number of batches of potion, $x$	4	6	8	10
Number of pounds of rose petals, $y$	18	28	36	45

Mixing Love Potion

D.

Number of batches of potion, $x$	14	16	18	20
Number of pounds of rose petals, $y$	35	40	45	50

10. The relationship between numbers in List X and List Y follows the rule  $y = x + 2.15$ . Which diagram shows this relationship?

A.

<u>List X</u>		<u>List Y</u>
29.1	→	31.25
34.1	→	35.25
39.1	→	40.25
44.1	→	45.25

C.

<u>List X</u>		<u>List Y</u>
29.1	→	31.15
34.1	→	36.15
39.1	→	41.15
44.1	→	46.15

B.

<u>List X</u>		<u>List Y</u>
31.15	→	33.30
33.2	→	35.35
35.25	→	37.40
37.3	→	49.45

D.

<u>List X</u>		<u>List Y</u>
31.15	→	29.1
36.15	→	34.1
41.15	→	39.1
46.15	→	44.1

11. Which table could represent the equation  $y = 0.2x$ ?

A.

$x$	$y$
5	10
10	20
15	30
20	40
40	80

C.

$x$	$y$
5	5.2
10	10.2
15	15.2
20	20.2
40	40.2

B.

$x$	$y$
1	5
2	10
3	15
4	20
5	40

D.

$x$	$y$
5	1
10	2
15	3
20	4
40	8

12. Stinky Stan is ordering cases of Tennis Shoe Re-Odorizer for all of his friends. The relationship between  $x$ , the number of cases he will order, and  $y$ , the number of cans of Re-Odorizer he will receive, can be represented by the equation  $y = 25x$ . Which table contains only values that represent the equation?

A.

Re-Odorizer

Number of cases, $x$	Number of cans, $y$
3	25
6	50
9	75
15	100

B.

Re-Odorizer

Number of cases, $x$	Number of cans, $y$
3	75
6	150
9	225
15	375

C.

Re-Odorizer

Number of cases, $x$	Number of cans, $y$
2	50
6	75
10	125
14	175

D.

Re-Odorizer

Number of cases, $x$	Number of cans, $y$
3	75
6	100
9	125
15	200



13. Which table of values does NOT represent  $y = x + 3.5$ ?

A.

$x$	$y$
1	4.5
2	5.5
3	6.5
5	8.5

B.

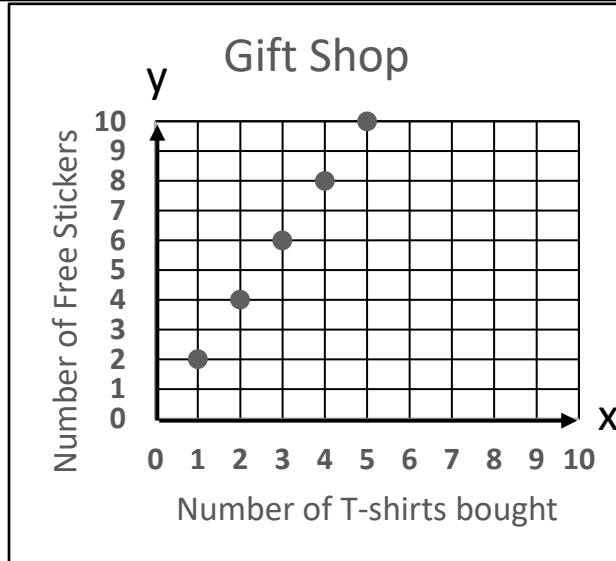
$x$	$y$
2	5.5
4	8.5
5	9.5
6	10.5

C.

$x$	$y$
4	7.5
5	8.5
6	9.5
9	12.5

D.

$x$	$y$
1	4.5
3	6.5
7	10.5
9	12.5



14. The customers of a gift shop receive free stickers for every T-shirt they buy. The graph shows the relationship between  $x$ , the number of T-shirts customers buy and  $y$ , the number of stickers customers receive. Which table also represents this relationship?

A.

B.

C.

D.

Gift Shop

Number of T-shirts Bought	Number of Free Stickers
6	6
7	7
8	8
9	9

Gift Shop

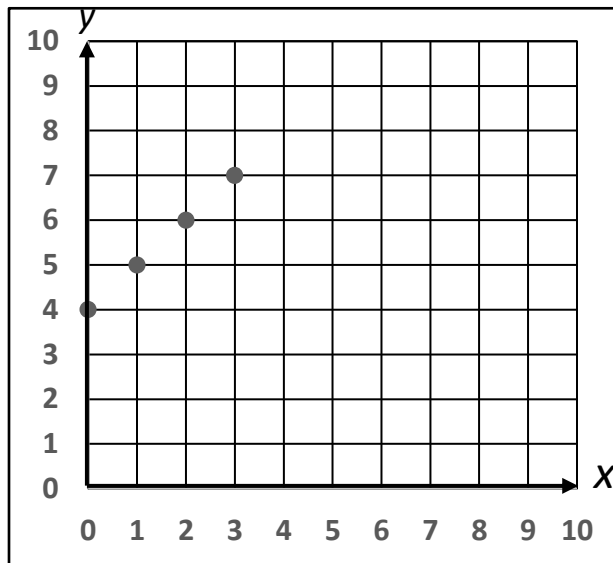
Number of T-shirts Bought	Number of Free Stickers
6	3
10	5
14	7
18	9

Gift Shop

Number of T-shirts Bought	Number of Free Stickers
6	12
7	14
8	16
9	18

Gift Shop

Number of T-shirts Bought	Number of Free Stickers
6	18
10	30
14	42
18	54



15. The ordered pairs for the points on the coordinate plane satisfy the equation  $y = x + 4$ . Which of these tables shows other points that satisfy the equation  $y = x + 4$ ?

A.

$x$	5	6	7	8
$y$	9	10	11	12

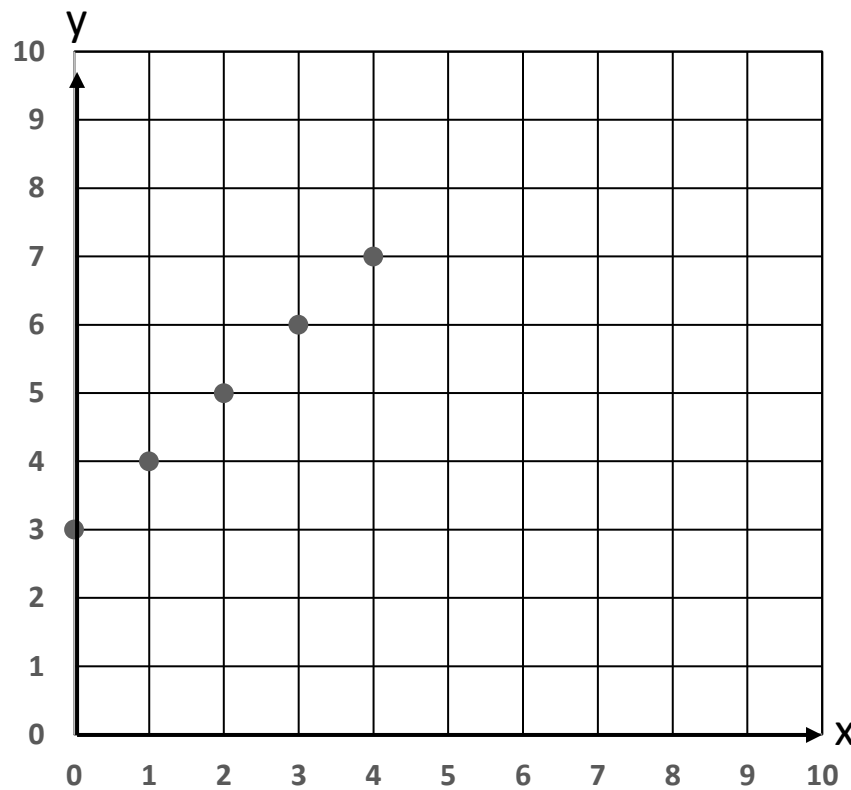
B.

$x$	9	10	11	12
$y$	5	6	7	8

C.

$x$	5	6	7	8
$y$	5.4	6.4	7.4	8.4

D. None of these



16. The points plotted on the coordinate grid represent the number  $y = x + 3$ . Which table also represents this rule?

A.

x	y
7	4
8	5
9	6
10	7

B.

x	y
5	15
6	18
7	21
8	24

C.

x	y
4	7
5	10
6	14
7	17

D.

x	y
4	7
5	8
6	9
7	10

**Unit: 5<sup>th</sup> – Coordinate Plane**  
**Lesson: 5.4.C – Numerical Patterns**  
**Problem Set 3**

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1 A	2 D	3 A	4 A
5 C	6 D	7 C	8 B
9 C	10 B	11 D	12 B
13 B	14 C	15 A	16 D
17 D	18 A	19 C	20 D
21 C	22 B	23 C	24 B
25 B	26 B	27 C	28 B
29 A	30 A	31 C	32 A



17. Which table of values does NOT represent  $y = x + 6.2$ ?

A.

$x$	$y$
1	7.2
2	8.2
3	9.2
5	11.2

B.

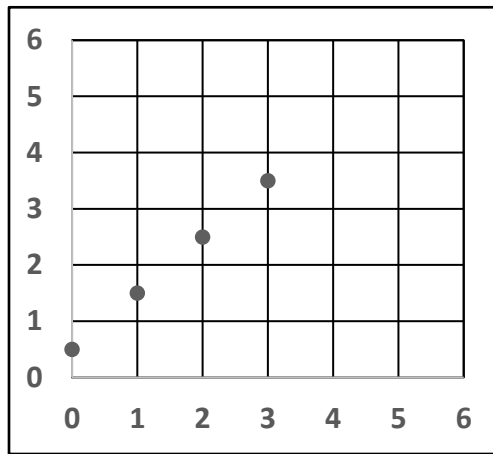
$x$	$y$
2	8.2
4	10.2
5	11.2
6	12.2

C.

$x$	$y$
4	10.2
5	11.2
6	12.2
9	15.2

D.

$x$	$y$
1	6.2
3	8.2
7	12.2
9	14.2



18. The graph shown represents the rule  $y = x + 0.5$ . Which table contains only values that represent the rule?

A.

$x$	0	1	2	3	9
$y$	0.5	1.5	2.5	3.5	9.5

B.

$x$	0	1	2	3	9
$y$	0.5	1	1.5	2	7.5

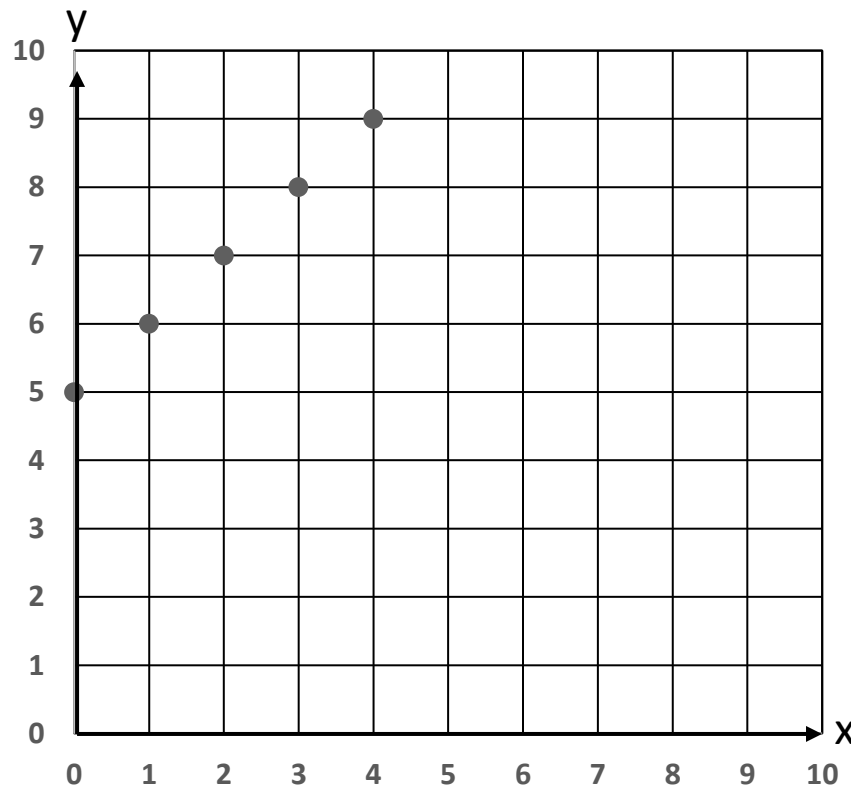
C.

$x$	0	1	2	3	9
$y$	0	1.5	2.5	3.5	9.5

D.

$x$	0	1	2	3	9
$y$	1.5	2.5	3.5	4.5	10.5





19. The points plotted on the coordinate grid represent the number  $y = x + 5$ . Which table also represents this rule?

A.

x	y
9	4
11	6
14	9
20	15

B.

x	y
5	10
6	15
7	20
8	25

C.

x	y
4	9
5	10
6	11
7	12

D.

x	y
4	20
5	25
6	30
7	35

20. The equation  $y = 2.5x$  can be used to determine  $y$ , the number of cups of slime that Creepy Cristabelle can produce per hour,  $x$ , using her slime-making machine. Which table shows the relationship between  $x$  and  $y$ ?

Making Slime

A.

Number of hours, $x$	9	11	13	15
Number of cups of slime, $y$	18	22.5	26	30.5

Making Slime

B.

Number of hours, $x$	10	12	14	16
Number of cups of slime, $y$	12.5	14.5	16.5	18.5

Making Slime

C.

Number of hours, $x$	13	15	17	19
Number of cups of slime, $y$	26	30	34	38

Making Slime

D.

Number of hours, $x$	14	16	18	20
Number of cups of slime, $y$	35	40	45	50

21. The relationship between numbers in List X and List Y follows the rule  $y = x + 2.05$ . Which diagram shows this relationship?

A.

<u>List X</u>		<u>List Y</u>
29.1	→	31.6
34.1	→	36.6
39.1	→	41.6
44.1	→	46.6

C.

<u>List X</u>		<u>List Y</u>
29.1	→	31.15
34.1	→	36.15
39.1	→	41.15
44.1	→	46.15

B.

<u>List X</u>		<u>List Y</u>
31.15	→	33.15
33.2	→	35.2
35.25	→	37.25
37.3	→	39.3

D.

<u>List X</u>		<u>List Y</u>
31.15	→	29.1
36.15	→	34.1
41.15	→	39.1
46.15	→	44.1

22. Which table represents the equation  $y = 5x$ ?

A.

$x$	$y$
5	1
10	2
25	5
30	6

B.

$x$	$y$
1	5
3	15
5	25
7	35

C.

$x$	$y$
1	5
3	8
4	9
7	12

D.

$x$	$y$
1	5
4	10
6	15
7	20

23. Which table represents the equation  $y = 0.5x$ ?

A.

$x$	$y$
0.5	1
3	6
7.5	15
4.5	9

B.

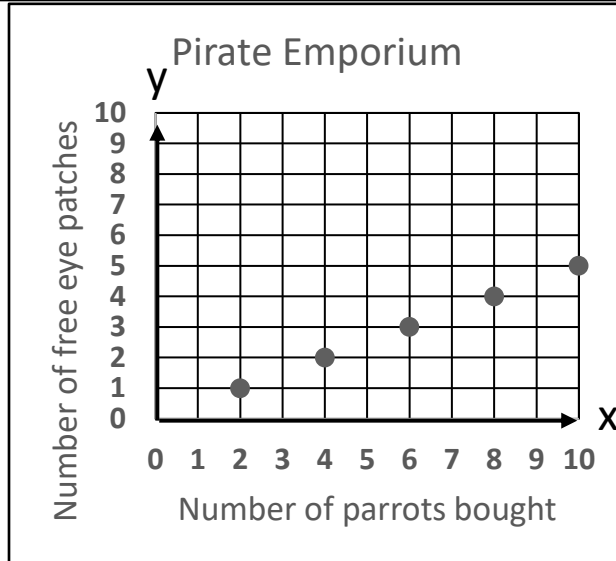
$x$	$y$
1	2
3	6
5	10
7	15

C.

$x$	$y$
1	0.5
3	1.5
4	2
7	3.5

D.

$x$	$y$
1	5
4	20
6	30
7	35



24. The customers at the Pirate Emporium receive free eye patches depending on the number of talking parrots they buy. The graph shows the relationship between  $x$ , the number of talking parrots customers buy and  $y$ , the number of eye patches customers receive. Which table also represents this relationship?

A.

Pirate Emporium

Number of Parrots Bought	Number of Free eye patches
6	6
7	7
8	8
9	9

B.

Pirate Emporium

Number of Parrots Bought	Number of Free eye patches
2	1
4	2
6	3
8	4

C.

Pirate Emporium

Number of Parrots Bought	Number of Free eye patches
2	4
4	8
6	12
8	16

D.

Pirate Emporium

Number of Parrots Bought	Number of Free eye patches
6	5
10	9
14	13
18	17

**Unit: 5<sup>th</sup> – Coordinate Plane**  
**Lesson: 5.4.C – Numerical Patterns**  
**Problem Set 4**

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1 A	2 D	3 A	4 A
5 C	6 D	7 C	8 B
9 C	10 B	11 D	12 B
13 B	14 C	15 A	16 D
17 D	18 A	19 C	20 D
21 C	22 B	23 C	24 B
25 B	26 B	27 C	28 B
29 A	30 A	31 C	32 A





25. Which table could represent the equation  $y = 0.1x$ ?

A.

$x$	$y$
5	50
10	100
15	150
20	400
40	400

C.

$x$	$y$
5	5.1
10	10.1
15	15.1
20	20.1
40	40.1

B.

$x$	$y$
5	0.5
10	1.0
15	1.5
20	2.0
40	4.0

D.

$x$	$y$
5	0.5
10	0.6
15	0.7
20	0.8
40	1.2

26. A restaurant gave a bonus to employees if they brought in a successful job applicant. The relationship between the employee's original weekly pay and their paycheck including the bonus, can be represented by the equation  $y = x + 50$ . Which table represents this relationship?

A.

Bonus Pay

Original pay, $x$	Pay including bonus, $y$
200	250
285	300
335	350
420	400

B.

Bonus Pay

Original pay, $x$	Pay including bonus, $y$
200	250
285	335
335	385
420	470

C.

Bonus Pay

Original pay, $x$	Pay including bonus, $y$
200	250
285	325
335	365
420	440

D.

Bonus Pay

Original pay, $x$	Pay including bonus, $y$
250	200
335	285
385	335
470	420

27. Which table contains only  $x$ -values and  $y$ -values that make the equation  $y = 5.2x$  true?

A.

$x$	$y$
2	10.2
4	20.2
6	30.2
8	40.2

B.

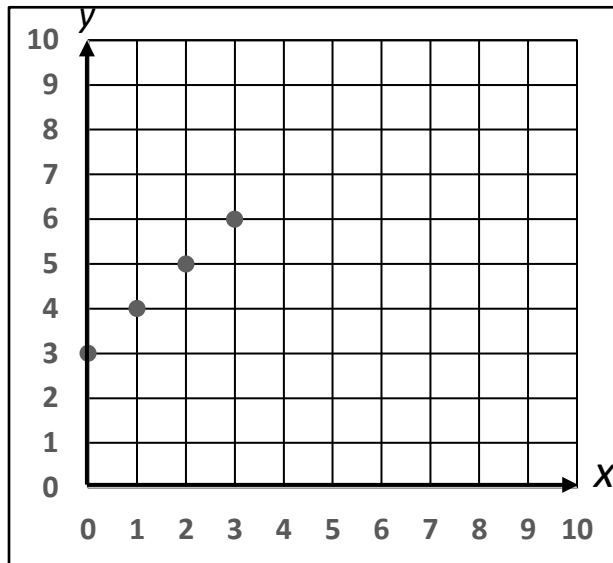
$x$	$y$
10.2	2
20.2	4
30.2	6
40.2	8

C.

$x$	$y$
3	15.6
5	26
7	36.4
9	46.8

D.

$x$	$y$
3	8.2
5	10.2
7	12.2
9	14.2



28. The ordered pairs for the points on the coordinate plane satisfy the equation  $y = x + 3$ . Which of these tables shows other points that satisfy the equation  $y = x + 3$ ?

A.

$x$	4	7	10	13
$y$	6	9	12	15

B.

$x$	9	12	15	18
$y$	12	15	18	21

C.

$x$	12	15	18	21
$y$	9	12	15	18

D. None of these

29. Students earned extra points on a science test for correctly answering a bonus question. The relationship between the student's original test score and their final test score, including the extra points, can be represented by the equation  $y = x + 25$ . Which table represents this relationship?

A.

Science Test

Original test score, $x$	Final test score, $y$
65	90
70	95
78	103
85	110

B.

Science Test

Original test score, $x$	Final test score, $y$
72	97
80	105
83	98
91	106

C.

Science Test

Original test score, $x$	Final test score, $y$
70	45
79	54
81	56
85	60

D.

Science Test

Original test score, $x$	Final test score, $y$
70	25
80	50
90	75
100	100

30. Which table contains only  $x$ -values and  $y$ -values that make the equation  $y = 4.8x$  true?

A.

$x$	$y$
2	9.6
4	19.2
6	28.8
8	38.4

B.

$x$	$y$
2	4.8
4	9.6
6	14.4
8	19.2

C.

$x$	$y$
3	7.8
5	9.8
7	11.8
9	13.8

D.

$x$	$y$
3	14.4
5	19.2
7	24.0
9	28.8

31. The equation  $y = 0.5x$  can be used to determine  $y$ , the number of cups of possum fur that Disgusting Donald needs per serving,  $x$ , of his famous Fur& Toenail Soup. Which table shows the relationship between  $x$  and  $y$ ?

Fur & Toenail Soup

A.

Number of servings of soup, $x$	9	11	13	15
Number of cups of fur, $y$	9.5	11.5	13.5	15.5

Fur & Toenail Soup

B.

Number of servings of soup, $x$	10	12	14	16
Number of cups of fur, $y$	50	60	70	80

Fur& Toenail Soup

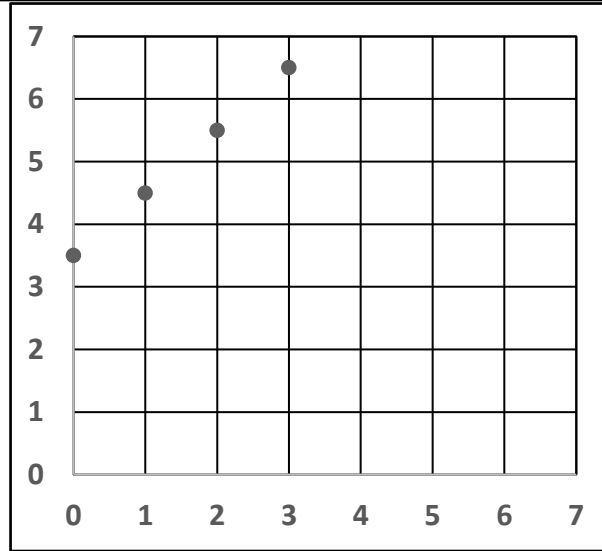
C.

Number of servings of soup, $x$	13	15	17	19
Number of cups of fur, $y$	6.5	7.5	8.5	9.5

Fur & Toenail Soup

D.

Number of servings of soup, $x$	14	16	18	20
Number of cups of fur, $y$	3.5	4	4.5	5



32. The graph shown represents the rule  $y = x + 3.5$ . Which table contains only values that represent the rule?

A.

$x$	0	1	2	3	9
$y$	3.5	4.5	5.5	6.5	12.5

B.

$x$	0	1	2	3	9
$y$	0	3.5	4.5	5.5	11.5

C.

$x$	0	1	2	3	9
$y$	0	3.5	7	10.5	31.5

D.

$x$	0	1	2	3	9
$y$	3.5	3.5	6.5	9.5	27.5