

Patterns, Sequences

Long-Term Memory Review – Grade 6

Review 1

- Describe the following pattern as you move from one term to the next:
1, 3, 5, 7, ...
- When defining a number sequence (pattern) it is common that you would look for a _____ to apply when looking for any term in the sequence.
- Keith created a number sequence as shown at the right.

<i>Term(n)</i>	1	2	3	4
<i>Value</i>	2	4	6	8

What rule explains Keith's number sequence? _____

- The number sentence $y = x + 1$ was used to create the table at the right. What is the value of y when $x = 8$?

x	y
2	3
4	5
6	7
8	

- A) 6 B) 9 C) 10 D) 11

Patterns, Sequences

Long-Term Memory Review – Grade 6

Review 2

- Describe the following pattern as you move from one term to the next:
3, 9, 27, 81,
- When defining a number sequence _____ it is common that you would look for a rule to apply when looking for any term in the sequence.

- Kerry created a number sequence as shown at the right.

<i>Term(n)</i>	2	4	6	8
<i>Value</i>	10	20	30	

Complete the chart and state what rule explains Kerry's number sequence? _____

- The number sentence $y = x + 5$ was used to create the table at the right.
What is the value of y when $x = 12$?

x	y
6	11
8	13
10	15
12	

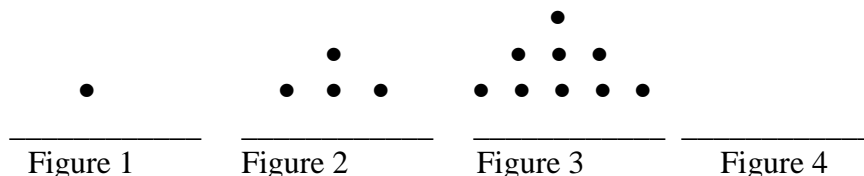
- A) 17 B) 24 C) 30 D) 60

- Lyle charges \$8 per hour for mowing lawns. Make a chart to show how much money Lyle earns each day for mowing 2 hours the first day, 4 hours the second day, and 6 hours the third day.
Let H = the number of hours and T = total amount of money earned.

H	2	4	6	...	10
T				...	

How much will he earn for 10 hours of mowing lawns? _____

- How many dots will be in the next figure? Draw the figure and explain how you arrived at this answer.



Explanation: _____

Patterns, Sequences

Long-Term Memory Review – Grade 6

Review 3

- Describe the following pattern as you move from one term to the next:
11, 13, 15, 17,
- When defining a number sequence (pattern) it is common that you would look for a rule to apply when looking for any _____ in the sequence.
- Karen created a number sequence as shown at the right.

<i>n</i>	3	5	6	10
<i>Value</i>	5	7	8	

Complete the table and write the rule for the number sequence? _____

- Gloria created a number pattern following the rule of $2x + 5$.
The table at the right shows 3 samples from her number pattern.
What is the value of *y* when *x* = 15?

<i>x</i>	<i>y</i>
4	13
7	19
12	29
15	

- A) 22 B) 30 C) 35 D) 44
- Tammy charges \$4 per hour for babysitting. Make a chart to show how much money Tammy earns for babysitting 1, 2, 3, 4, and 5 hours.
Let H = the number of hours and
T = total amount of money earned.

H	1	2	3	4	5	...	8
T						...	

How much will she earn for 8 hours of baby-sitting? _____

- Draw a pattern of dots where Figure 1 has 2 dots, Figure 2 has 4 dots, Figure 3 has 6 dots, and Figure 4 has 8 dots. If the pattern continues, then draw and state the number of dots in Figure 5.

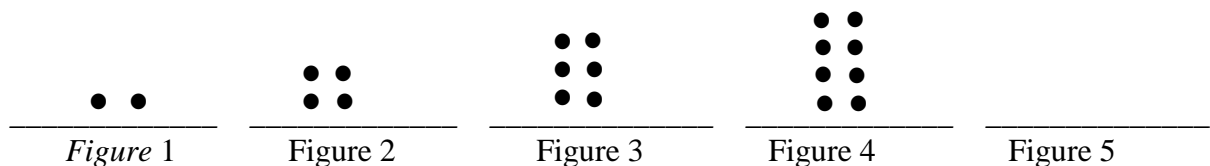


Figure 5 has _____ dots.

Patterns, Sequences

Long-Term Memory Review – Grade 6 Review 4

- Describe the following pattern as you move from one term to the next:
13, 26, 52, 104,
- When defining a number _____ (pattern) it is common that you would look for a rule to apply when looking for any term in the sequence.

- Kim created a number sequence as shown at the right.

<i>n</i>	5	8		12	15
<i>Value</i>	10		22		30

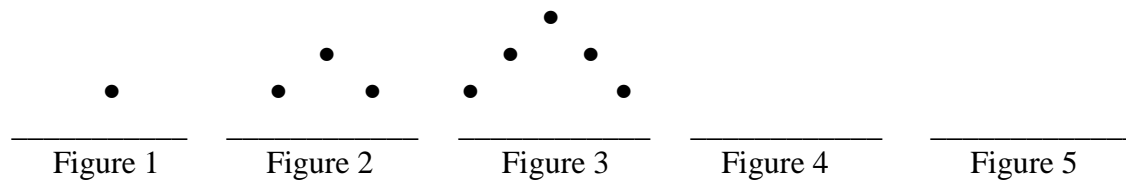
Complete the table and write the rule for the number sequence. _____

- Maggie created a pattern showing square numbers beginning with 1. 1, 4, 9, 16, _____, 36, 49.
A) 21 B) 25 C) 32 D) 35
- Lyle charges \$7 per hour for mowing lawns, Make a chart to show how much money Lyle earns each day for mowing 3 hours the first day, 4 hours the second day, and 5 hours the third day.
Let H = the number of hours and T = total amount of money earned.

H	3	4	5	...	10
T				...	

How much will he earn for 10 hours of mowing lawns? _____

- How many dots will be in each of the next two figures?
Draw the figures and explain how you arrived at these answers.



Explanation: _____

Patterns, Sequences

Long-Term Memory Review – Grade 6

Quiz

1. Describe the following pattern as you move from one term to the next:
3, 6, 9, 12,

2. When defining a number sequence (pattern) it is common that you would look for a _____ to apply when looking for any term in the sequence.

3. Ken created a number sequence as shown at the right.

<i>n</i>	3	5	7	9
<i>Value</i>	12	20	28	36

What rule explains Ken's number sequence? _____

4. The number sentence $y = x + 5$ was used to create the table at the right.
What is the value of y when $x = 12$?

<i>x</i>	<i>y</i>
6	11
8	13
10	15
12	

- A) 17 B) 24 C) 30 D) 60

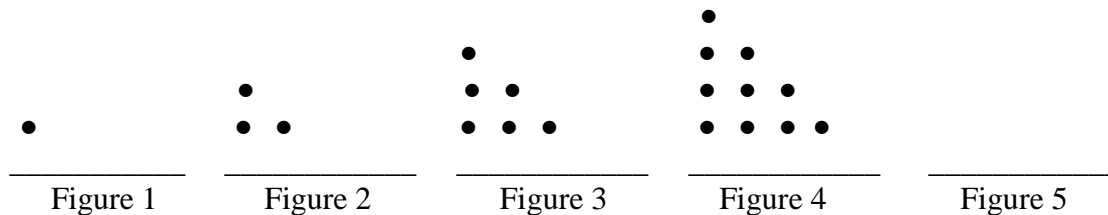
5. Tammy charges \$3 per hour for babysitting. Make a chart to show how much money Tammy earns for babysitting 1, 2, 3, 4, and 5 hours.

Let H = the number of hours and
 T = total amount of money earned.

H	1	2	3	4	5	8
T						

How much will she earn for 8 hours of babysitting? _____

6. How many dots will be in the next figure? Draw the figure and explain how you arrived at this answer.



Explanation: _____

Patterns, Sequences

Long-Term Memory Review – Grade 6

ANSWERS

Review 1 Answers

- 1) Add 2 to the previous term
- 2) Rule
- 3) $N \times 2$ or $2N$
- 4) B. 9

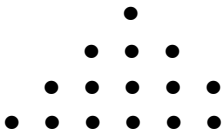
Review 2 Answers

- 1) Multiply the previous term by 3
- 2) pattern
- 3) 40; $N \times 5$ or $5N$
- 4) A. 17

5)

H	2	4	6	...	10
\$	16	32	48	...	80

; \$80

- 6)
- 
- ; each row has 2 more than the one above
- Figure 4

Review 3 Answers

- 1) Add 2 to the previous term
- 2) term
- 3) 12 ; $N + 2$
- 4) C. 35

5)

H	1	2	3	4	5	8
\$	4	8	12	16	20	32

; \$32

- 6) Answers may vary
- | | | | | |
|----------|----------|----------|----------|-----------|
| Figure 1 | Figure 2 | Figure 3 | Figure 4 | Figure 5 |
| (2 dots) | (4 dots) | (6 dots) | (8 dots) | (10 dots) |
| • | • • | • • • | • • • • | • • • • • |
| • | • • | • • • | • • • • | • • • • • |
- Figure 5 has 10 dots.

Patterns, Sequences

Long-Term Memory Review – Grade 6

Review 4 Answers

1) Multiply the previous term by 2

2) Sequence

N	5	8	11	12	15	; $N \times 2$ or $2N$
#	10	16	22	24	30	

4) B. 25

H	3	4	5	...	10	; \$70
\$	21	28	35	...	70	

6)

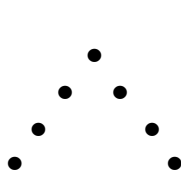


Figure 4
(7 dots)

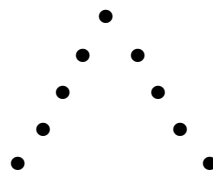


Figure 5
(9 dots)

; each figure has 2 more dots than the previous figure.

Quiz- Answers

1) Add 3 to the previous term

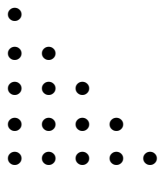
2) rule

3) $N \times 4$ or $4N$

4) A. 17

H	1	2	3	4	5	8	; \$24
\$	3	6	9	12	15	...	24	

6)



; each figure number determines how many dots

Figure 5 are on each leg of the right triangle. The rule is $\frac{n^2 + n}{2}$