

PA4-11: Introduction to T-tables

Abdul makes a growing pattern with blocks.

He records the number of blocks in each figure in a chart or T-table. He also records the number of blocks he adds each time he makes a new figure.



Figure 1

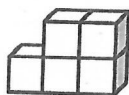


Figure 2

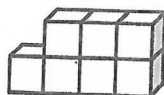


Figure 3

Figure	# of Blocks
1	3
2	5
3	7

2 ← Number of blocks added each time
2 ←

The number of blocks in the figures are 3, 5, 7, ...

Abdul writes a rule for this number pattern.

RULE: Start at 3 and add 2 each time.

1. Abdul makes other growing patterns with blocks. How many blocks does he add to make each new figure? Write your answer in the circles provided. Then write a rule for the pattern.

a)

Figure	Number of Blocks
1	3
2	7
3	11

Rule:

b)

Figure	Number of Blocks
1	2
2	6
3	10

Rule:

c)

Figure	Number of Blocks
1	2
2	4
3	6

Rule:

d)

Figure	Number of Blocks
1	1
2	6
3	11

Rule:

e)

Figure	Number of Blocks
1	5
2	9
3	13

Rule:

f)

Figure	Number of Blocks
1	12
2	18
3	24

Rule:

g)

Figure	Number of Blocks
1	2
2	10
3	18

Rule:

h)

Figure	Number of Blocks
1	3
2	6
3	9

Rule:

i)

Figure	Number of Blocks
1	6
2	13
3	20

Rule:

BONUS

2. Extend the number pattern. How many blocks would be used in the 6th figure?

a)

Figure	Number of Blocks
1	2
2	7
3	12

b)

Figure	Number of Blocks
1	3
2	6
3	9

c)

Figure	Number of Blocks
1	3
2	8
3	13

3. Amy makes a growing pattern with blocks. After making the 3rd figure, she only has 14 blocks left. Does she have enough blocks to complete the 4th figure?

a)

Figure	Number of Blocks
1	3
2	7
3	11

YES NO

b)

Figure	Number of Blocks
1	7
2	10
3	13

YES NO

c)

Figure	Number of Blocks
1	1
2	5
3	9

YES NO

4. In your notebook, make a chart to show how many squares will be needed to make the fifth figure in each pattern.

