

Which expression can be used to find the values of  $s(n)$  in the table below?

- F  $3n$
- G  $5n$
- H  $n + 4$
- J  $3n + 2$

$n$	1	2	3	4	5	6
$s(n)$	5	8	11	14	?	?

Which answer would you pick? Scroll down to see the correct answer and why the other answer choices are incorrect.

**Responses.**

Which expression can be used to find the values of  $s(n)$  in the table below?

- F  $3n$

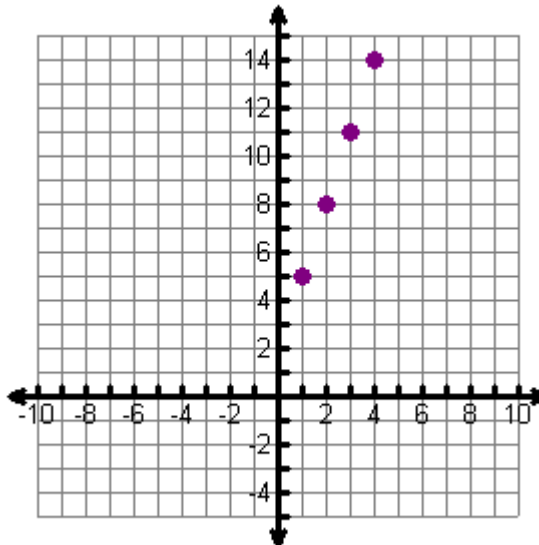
$n$	1	2	3	4	5	6
$s(n)$	5	8	11	14	?	?

After plotting the points, the slope can be determined to be 3. Follow the points backwards and the y-intercept would be 2.

The expression should be  $3n + 2$ .

Verify:

The calculator's table does not match the given table.



Plot1	Plot2	Plot3
Y1	$3X$	
Y2	=	
Y3	=	
Y4	=	
Y5	=	
Y6	=	
Y7	=	

X	Y1	
0	0	
1	3	
2	6	
3	9	
4	12	
5	15	
6	18	

X=0

Which expression can be used to find the values of  $s(n)$  in the table below?

**G**  $5n$

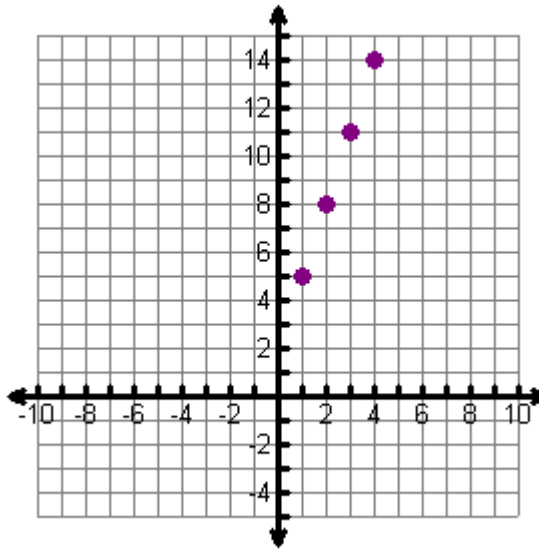
$n$	1	2	3	4	5	6
$s(n)$	5	8	11	14	?	?

After plotting the points, the slope can be determined to be 3. Follow the points backwards and the y-intercept would be 2.

The expression should be  $3n + 2$ .

Verify:

The calculator's table does not match the given table. (1, 5) is in the calculator but no other points.



Plot1	Plot2	Plot3
$Y_1 = 5X$		
$Y_2 =$		
$Y_3 =$		
$Y_4 =$		
$Y_5 =$		
$Y_6 =$		
$Y_7 =$		

X	Y1	
0	0	
1	5	
2	10	
3	15	
4	20	
5	25	
6	30	

X=0

Which expression can be used to find the values of  $s(n)$  in the table below?

**H**  $n + 4$

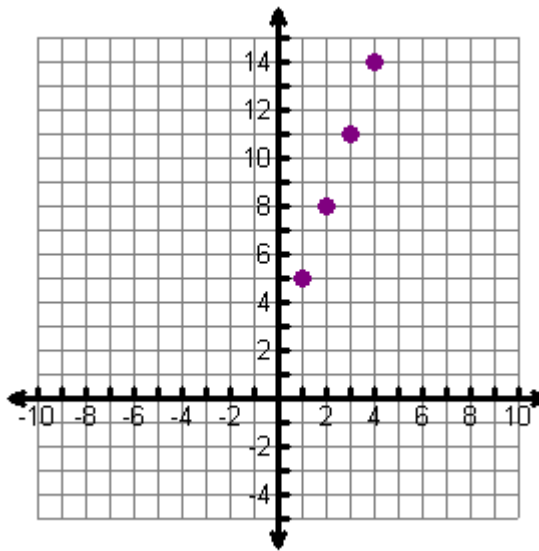
$n$	1	2	3	4	5	6
$s(n)$	5	8	11	14	?	?

After plotting the points, the slope can be determined to be 3. Follow the points backwards and the y-intercept would be 2.

The expression should be  $3n + 2$ .

Verify:

The calculator's table does not match the given table. (1, 5) is in the calculator but no other points.



Plot1	Plot2	Plot3
$Y_1 = X + 4$		
$Y_2 =$		
$Y_3 =$		
$Y_4 =$		
$Y_5 =$		
$Y_6 =$		
$Y_7 =$		

X	Y1	
0	4	
1	5	
2	6	
3	7	
4	8	
5	9	
6	10	

X=0

Which expression can be used to find the values of  $s(n)$  in the table below?

**J**  $3n + 2$

$n$	1	2	3	4	5	6
$s(n)$	5	8	11	14	?	?

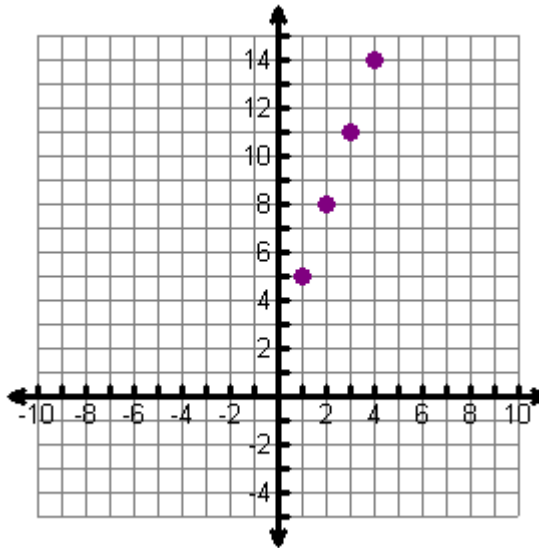
After plotting the points, the slope can be determined to be 3. Follow the points backwards and the y-intercept would be 2.

The expression should be  $3n + 2$ .

Verify:

The calculator's table matches!

I can count this problem correct!



Plot1	Plot2	Plot3
$Y_1 = 3X + 2$		
$Y_2 =$		
$Y_3 =$		
$Y_4 =$		
$Y_5 =$		
$Y_6 =$		
$Y_7 =$		

X	Y1	
0	2	
1	5	
2	8	
3	11	
4	14	
5	17	
6	20	

$X = 0$

2006 10<sup>th</sup> Grade

The squares below show a pattern.

Which expression can be used to determine the number of squares at stage  $n$ ?

**F**  $5n - 3$

**G**  $4n - 2$

**H**  $2n^2$

**J**  $n^2 + n$

Stage 1	□ □
Stage 2	□ □ □ □ □ □
Stage 3	□ □ □ □ □ □ □ □ □ □ □ □
Stage 4	□ □

See the table for the values:

Stage, $n$	Number of Squares
1	2
2	6
3	12
4	20

Which answer would you pick? Scroll down to see the correct answer and why the other answer choices are incorrect.

**Responses.**

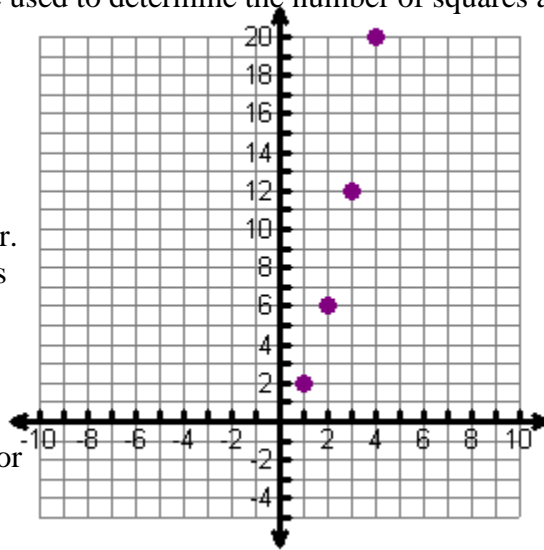
Which expression can be used to determine the number of squares at stage  $n$ ?

**F**  $5n - 3$

Incorrect.

Not F.

It's not easy to see but these points are not linear. The slope between points are not constant.



Stage, $n$	Number of Squares
1	2
2	6
3	12
4	20

X	Y1
0	-3
1	2
2	6
3	12
4	20
5	30
6	42

X=0

The table on the calculator does not match.

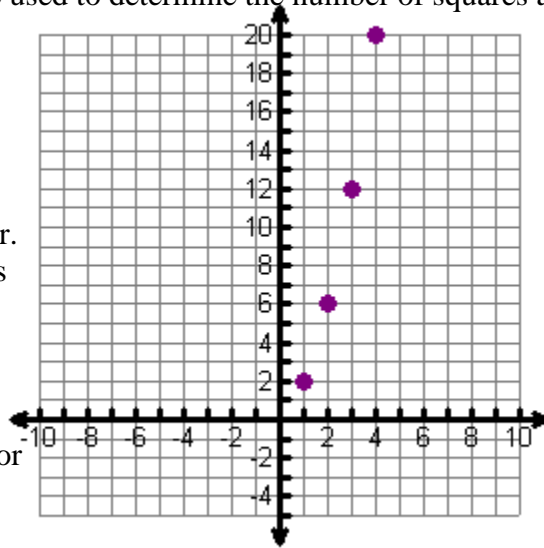
Which expression can be used to determine the number of squares at stage  $n$ ?

**G**  $4n - 2$

Incorrect.

Not G.

It's not easy to see but these points are not linear. The slope between points is not constant.



Stage, $n$	Number of Squares
1	2
2	6
3	12
4	20

X	Y1
0	-2
1	2
2	6
3	10
4	14
5	18
6	22

X=0

The table on the calculator does not match.

Which expression can be used to determine the number of squares at stage  $n$ ?

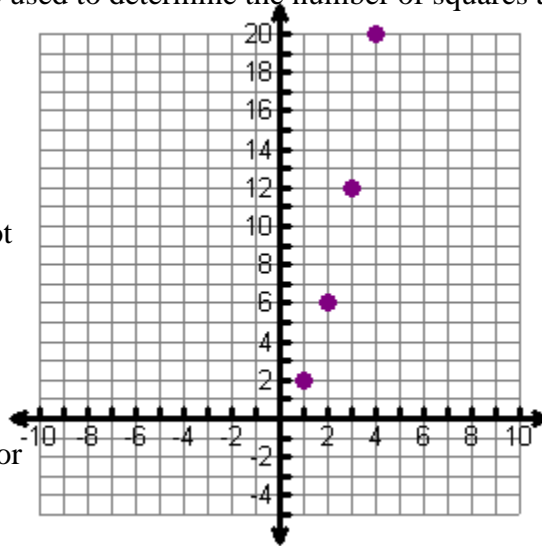
**H**  $2n^2$

Incorretct.

Not H.

These points represent a quadratic function but not the one we want.

The table on the calculator does not match.



Stage, $n$	Number of Squares
1	2
2	6
3	12
4	20

X	Y1
0	0
1	2
2	6
3	12
4	20
5	30
6	42

X=0

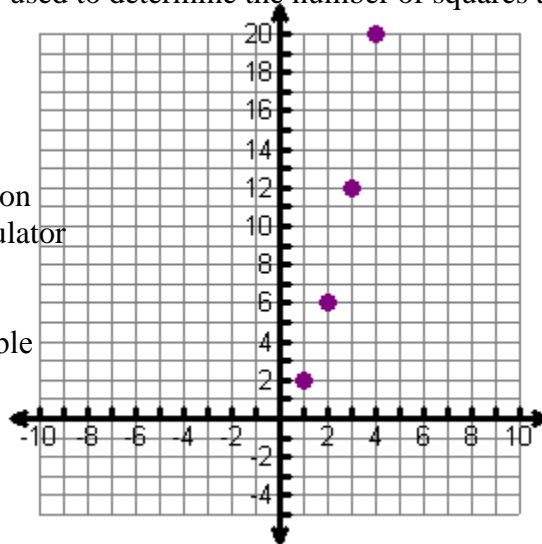
Which expression can be used to determine the number of squares at stage  $n$ ?

**J**  $n^2 + n$

Correct.

This is a quadratic function and the table on the calculator matches perfectly.

Don't worry that your table doesn't have (5, 30) and (6, 42).



Stage, $n$	Number of Squares
1	2
2	6
3	12
4	20

X	Y1
0	0
1	2
2	6
3	12
4	20
5	30
6	42

X=0