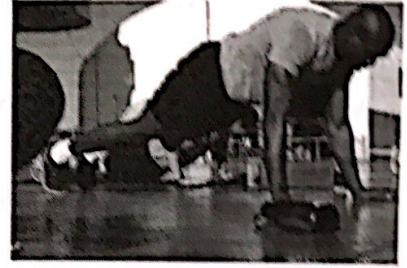


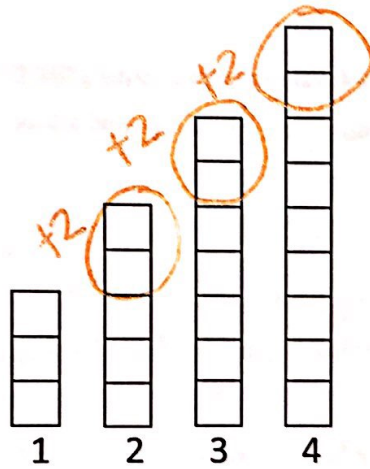
1.4 Scott's Workout

A Solidify Understanding Task



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<https://i11c.kr/p/1f16iCW>

Scott has decided to add push-ups to his daily exercise routine. He is keeping track of the number of push-ups he completes each day in the bar graph below, with day one showing he completed three push-ups. After four days, Scott is certain he can continue this pattern of increasing the number of push-ups he completes each day.



1. How many push-ups will Scott do on day 10?

3

| | | | | | | | | | |
|---|---|---|---|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 |

2. How many push-ups will Scott do on day n ?

$$2n + 1$$

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- 3. Model the number of push-ups Scott will complete on any given day. Include both explicit and recursive equations.

explicit

$$y = 2n + 1$$

↑ ↑

Pattern Start Value

recursive $f(1) = 3$

$$f(n) = \underbrace{f(n-1)} + 2$$

↑

Previous term

- 4. Aly is also including push-ups in her workout and says she does more push-ups than Scott because she does fifteen push-ups every day. Is she correct? Explain.

| | | | | | | | | | |
|---|---|---|---|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 |

Scott's workout

Scott's push ups increase by 2 every day. Aly keep her workout to the same 15 push ups.

For the first 6 days Aly does more than Scott. On day 7 they do the same amount but pass day 7 Scott will do more push ups