

1.4 Scott's Workout

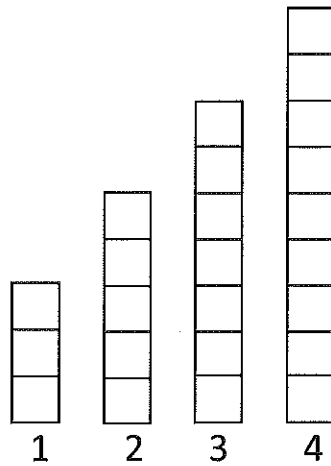
A Solidify Understanding Task



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<https://flrc.kr/p/fktkCW>

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

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

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.

READY, SET, GO!

Name _____

Period _____

Date _____

READY

Topic: Use function notation to evaluate equations.

Evaluate the given equation for the indicated function values.

- | | | | |
|--------------------------------|----------------------------------|---------------------------------|-----------------------------|
| 1. $f(n) = 5n + 8$
$f(4) =$ | 2. $f(n) = -2n + 1$
$f(10) =$ | 3. $f(n) = 6n - 3$
$f(-5) =$ | 4. $f(n) = -n$
$f(9) =$ |
| $f(-2) =$ | $f(-1) =$ | $f(0) =$ | $f(-11) =$ |
| 5. $f(n) = 5^n$
$f(2) =$ | 6. $f(n) = 3^n$
$f(4) =$ | 7. $f(n) = 10^n$
$f(6) =$ | 8. $f(n) = 2^n$
$f(0) =$ |
| $f(3) =$ | $f(1) =$ | $f(0) =$ | $f(5) =$ |

SET

Topic: Finding terms for a given sequence

Find the next 3 terms in each sequence. Identify the constant difference. Write a recursive function and an explicit function for each sequence. Circle where you see the common difference in both functions. (The first number is the 1st term, not the 0th term).

- | | |
|--|-----------------------------|
| 9. A) 3, 8, 13, 18, 23, _____, _____, _____, ... | B) Common Difference: _____ |
| C) Recursive Function: _____ | D) Explicit Function: _____ |
| 10. A) 11, 9, 7, 5, 3, _____, _____, _____, ... | B) Common Difference: _____ |
| C) Recursive Function: _____ | D) Explicit Function: _____ |
| 11. A) 3, 1.5, 0, -1.5, -3, _____, _____, _____, ... | B) Common Difference: _____ |
| C) Recursive Function: _____ | D) Explicit Function: _____ |

GO

Topic: Reading a graph

Olaf is a mountain climber. The graph shows Olaf's location on the mountain beginning at noon. Use the information in the graph to answer the following questions.

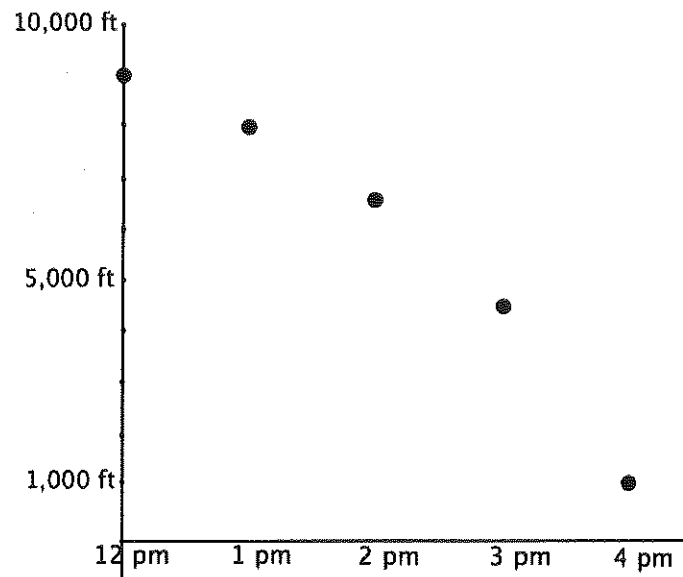
12. What was Olaf's elevation at noon?

13. What was his elevation at 2 pm?

14. How many feet had Olaf descended from noon until 2 pm?

15. Olaf reached the base camp at 4 pm. What is the elevation of the base camp?

16. During which hour was Olaf descending the mountain the fastest? Explain how you know.

17. Is the value of $f(n)$ the time or the elevation?