

READY, SET, GO!

Name _____

Period _____

Date _____

READYTopic: a_n notation for sequences

1. The sequence below shows the number of trees that a nursery plants each year.

2, 8, 32, 128 ...

Let a_n represent the current term in the sequence and a_{n-1} represent the previous term in the sequence. Which formula could be used to determine the number of trees the nursery will plant in year n ?

- A) $a_n = 4a_{n-1}$
B) $a_n = \frac{1}{4}a_{n-1}$
C) $a_n = 2a_{n-1} + 4$
D) $a_n = a_{n-1} + 6$
2. Given the sequence defined by the function $a_{n+1} = a_n + 12$ with $a_1 = 4$, write an explicit function rule.
3. Given the sequence defined by the function $a_{n+1} = \frac{3}{4}a_n$ with $a_1 = 424$, write an explicit function rule.

Lesson 1

SET

Topic: Simplifying algebraic expressions using properties of exponents

1. $a^3 \cdot a^5$	2. $7x^7 \cdot 9x^6$	3. $5v^2 \cdot 5v^2$
4. $\frac{9^7}{9^4}$	5. $\frac{81y^8}{3y^5}$	6. $-\frac{42y^6}{3y^6}$
7. $\frac{c^5}{c^7}$	8. $g^5 \cdot g^{-7}$	9. $(g^{-3})^{-5}$
10. -12^0	11. $(xy)^4 x^8 y^2$	12. $(x^2 y^5)^4 (x^8 y^2)$
13. $\left(\frac{a^5 b^4}{a^2}\right)^8$	14. $\left(\frac{x^3 y^0}{x^7 y^7}\right)^9$	15. $\left(\frac{4x^6 3y^3 z^5}{6x^8 2z^4}\right)^2$

GO!

Lesson 1

Topic: Solving two-step equations

1. $4x + 3 = 15$

2. $2x - 6 = 12$

3. $4 = \frac{1}{2}x - 3$

4. $-3x + 8 = -7$

5. $\frac{2}{3}x + 5 = 1$

6. Create a two-step equation whose solution is 8.