- **5-6.** What if the data for Lenny and George (from problem 5-1 classwork) matched the data in each table below? Assuming that the growth of the rabbits multiplies as it did in problem 5-1, complete each of the following tables. ***Show your thinking or give a brief explanation of how you know what the missing entries are.***

Month	0	1	2	3	4
Rabbits	4	12	36		

Month	0	1	2	3	4
Rabbits	6		24		96

5-7. Solve the following systems of equations algebraically.

a. $x + y = 3$
   $x = 3y - 5$

b. $x - y = -5$
   $y = -2x - 4$

5-8. For the function $f(x) = 2x - 3$, find the value of each expression below.

a. $f(1)$

b. $f(0)$

c. $f(-3)$

d. $f(1.5)$

e. What value of x would make $f(x) = 5$?

5-9. Andrew is taking Algebra 1 and is stuck on the problem shown below. Examine his work so far and help him by showing and explaining the remaining steps.

Original problem: Simplify $(3a^{-2}b)^3$.

He knows that $(3a^{-2}b)^3 = (3a^{-2}b)(3a^{-2}b)(3a^{-2}b)$. Now what? Finish the problem.

- **5-15.** Solve each of the following equations.

  a. $\dfrac{m}{6} = \dfrac{15}{18}$

  b. $\dfrac{\pi}{7} = \dfrac{a}{4}$

5-16. Write the equation of each line described below.

a. A line with slope -2 and y-intercept 7.

b. A line with slope $-\dfrac{3}{2}$ and y-intercept $(0, 4)$.

5-17. The dartboard shown at right is in the shape of an equilateral triangle. It has a smaller equilateral triangle in the center, which was made by joining the midpoints of the three edges. If a dart hits the board at random, what is the probability that:
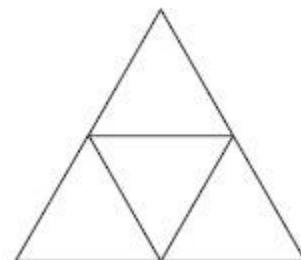
a. The dart hits the center triangle?

b. The dart misses the center triangle but hits the board?