

Linear Word Problems

Percent change

ex1 your raise : 2005 \rightarrow \$8
 2009 \rightarrow \$11

$$11 = r \cdot 8$$

$$1.375 = r$$

\rightarrow **37.5% raise**

new = $r \cdot$ Old
 then subtract 1
 from r

ex2 phone cost : 2000 \rightarrow \$60
 2018 \rightarrow \$450

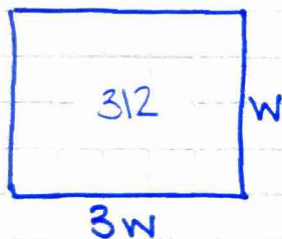
$$450 = r \cdot 60$$

$$7.5 = r$$

\rightarrow **650% increase**

Word problems

ex3 You are building a rectangular fence. The length is 3 times the width. The perimeter is 312 ft, solve for the dimensions.



$$2w + 2(3w) = 312$$

$$2w + 6w = 312$$

$$8w = 312$$

$$w = 39$$

$$l = 117$$

39 x 117 ft

Solving for a variable

ex4 $A = 3(a+k)$ solve for k

$$\frac{A}{3} = a+k \rightarrow \frac{A}{3} - a = k$$

ex5 $A = B + 4BC$, solve for B

$$A = B(1+4C)$$

$$\frac{A}{1+4C} = B$$

ex6 $A = \frac{1}{2}mn$, solve for m

$$2A = mn$$

$$\frac{2A}{n} = m$$