21 Points

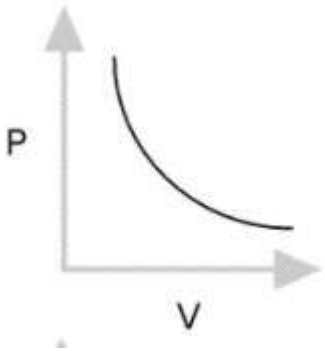
Name: KEY Pd: _____

Skill Building Quiz 1

For problems #1-4, generate the other two missing components based on the information that you are given. Every problem needs a graphical sketch, a general equation, and a relationship type.

1) State the relationship type and write the general equation for the following graphed relationship:

+3

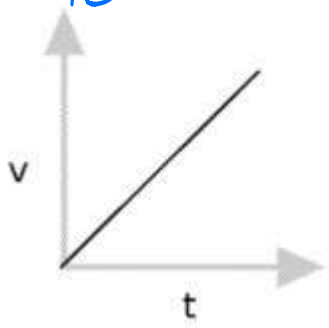


Relationship Type: Inverse

General Equation: $P = \frac{a}{V}$

2) State the relationship type and write the general equation for the following graphed relationship:

+3

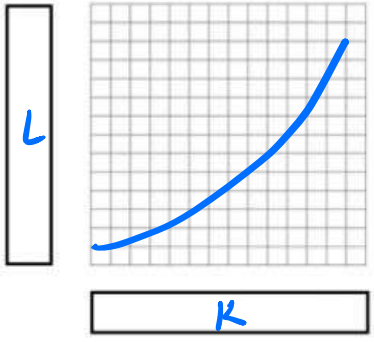


Relationship Type: Linear

General Equation: $v = mt + b$

3) Sketch the graph and state the relationship type for the following relationship:

+3



Relationship Type: Quadratic

General Equation:

$L = 2K^2 + 2$

Evaluate the given equations based on the information provided, using the Additive Property of Equality and the Multiplicative Property of Equality.

+3 4) Solve for h if $(t-7)^2 = 2 + h$ and $t = 9$

$(t-7)^2 = 2+h$

$(9-7)^2 = 2+h$

$2^2 = 2+h$

$4 = 2+h$

$4 = 2+h$

$\boxed{2 = h}$

+3 5) Solve for k if $2k + 4 = r - 2$ and $r = 8$

$2K+4 = r-2$

$2K+4 = 8-2$

$2K+4 = 6$

$2K = 2$

$\boxed{K = 1}$

Fill in the appropriate vocabulary term in the blank based on the given definition.

Linear Relationship: A direct proportionality between two variables that when plotted on a graph produces a straight, diagonal line.

Quadratic Relationship: A squared proportionality between two variables that when plotted on a graph produces a curved line, known as a parabola.

Scaling Coefficient: A value that scales, or multiplies a quantity.

Horizontal Relationship: A relationship between two variables where one variable has no effect on the other, that when plotted produces a horizontal line with an unchanging y value.

Inverse Relationship: A relationship between two variables whereas one variable increases, the other decreases, and visa versa. When plotted this produces a downward curving line.

Substitution: Replacing a variable with an equivalent quantity.