

Warm up: Follow link to "Catch a Fly Game" on web-site ( $x$, y ) Then, graph the following ordered pairs on the grid below.
A $(3,1)$
B $(-4,6)$
$C(-2,-3)$
D (5, -6)
$E(6,0)$

## Remember:

An ordered pair is used to show the position on a graph, where the" $x$ " (horizontal) value is $\qquad$ and the " $y$ " (vertical) value is
$\qquad$ _.


> To remember which is the $y$-axis, remember:
> "y in the sky"... the $y$-axis points up.

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( , )
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$\qquad$ *
Terms:

## Independent Variable:

The independent variable is plotted on the $\qquad$ -axis.
Dependent Variable:

The dependent variable is plotted on the $\qquad$ -axis.

## Outlier:

Example 1: The following data shows the minimum stopping distances on wet asphalt at various speeds.
a) Identify the independent variable and dependent variable.

## Independent Variable is <br> Dependent Variable is

b) Make a Scatter plot of the data.
c) Describe the relationship between the speed of the car and its stopping distance on wet asphalt.
As independent variable increases the dependent variable increases/decreases.
As
increases the

| Speed <br> $(\mathbf{k m} / \mathbf{h})$ | Stopping <br> Distance (m) |
| :---: | :---: |
| 10 | 0.9 |
| 20 | 3.2 |
| 30 | 7.3 |
| 40 | 13 |
| 50 | 20.1 |
| 60 | 28.6 |
| 70 | 39.1 |
| 80 | 51.3 |
| 90 | 64.8 |
| 100 | 80 |
| 110 | 96.5 |



Example. 2. The following table lists the number of hours of driving instruction received by students at a driving school and their driving test scores.
a) Identify the independent and dependent variable.

## Independent Variable is Dependent Variable is

b) Make a scatter plot of the data.
c) Describe the relationship between the variables.

## As

d) Are there any outliers? If so explain how they differ from the rest of the data.

| Students <br> Score | Instructional <br> Hours |
| :--- | :--- |
| 78 | 10 |
| 85 | 15 |
| 96 | 21 |
| 75 | 6 |
| 84 | 18 |
| 45 | 20 |
| 82 | 12 |



> *** Using a broken $y$ axis here would allow the data to better fill the graph but can cause issues with some of the work we will be doing later in this unit.

