## Graphing Applications

$\qquad$
For each of the equations, answer the following questions.

1) The library charges $50 ¢$ a week for a late book.
a) Write an equation for total fee.
b) Define the variables:

$$
X=
$$

$\qquad$
$\mathrm{Y}=$ $\qquad$
c) Find the $x$ - and $y$-intercept.
x-int:
y-int:
d) Complete the table and graph.

| $\mathbf{x}$ | $\mathbf{y}$ |
| :---: | :---: |
|  |  |
|  |  |
|  |  |

e) What is the slope of the line?

$$
\mathrm{M}=\mathrm{SLOPE}=\frac{R I S E}{R U N}=
$$


f) Does the graph increase or decrease?
2) Flowers are $\$ 1$ each with a $\$ 3$ delivery charge.
a) Write an equation for total fee.
c) Find the $x$ - and $y$-intercept.
x-int:
y-int:
d) Complete the table and graph.

| $\mathbf{x}$ | $\mathbf{y}$ |
| :---: | :---: |
|  |  |
|  |  |
|  |  |

e) What is the slope of the line?
$\mathrm{M}=\mathrm{SLOPE}=\frac{R I S E}{R U N}=$
b) Define the variables:
$\mathrm{X}=$ $\qquad$
$\mathrm{Y}=$ $\qquad$

f) Does the graph increase or decrease?
3) We owe $\$ 7$ and we are paying it back at the rate of $\$ 2$ a day.
a) Write an equation for the amount
b) Define the variables: owed.
$\mathrm{X}=$ $\qquad$
$\mathrm{Y}=$ $\qquad$
c) Find the $x$ - and $y$-intercept.
x-int:
y-int:
d) Complete the table and graph.

| $\mathbf{x}$ | $\mathbf{y}$ |
| :---: | :---: |
|  |  |
|  |  |
|  |  |

e) What is the slope of the line?
$\mathrm{M}=\mathrm{SLOPE}=\frac{R I S E}{R U N}=$
f) Does the graph increase or decrease?

4) A hole is $\mathbf{1}$ foot deep and you are digging down at $\mathbf{2}$ feet a minute.
a) Write an equation for the depth of the hole.
c) Find the $x$ - and $y$-intercept.

$$
\begin{aligned}
& \text { x-int: } \\
& \text { y-int: }
\end{aligned}
$$

d) Complete the table and graph.

| $\mathbf{x}$ | $\mathbf{y}$ |
| :---: | :---: |
|  |  |
|  |  |
|  |  |

e) What is the slope of the line?
$\mathrm{M}=\mathrm{SLOPE}=\frac{R I S E}{R U N}=$
f) Does the graph increase or decrease?
b) Define the variables:
$\mathrm{X}=$ $\qquad$
$\mathrm{Y}=$ $\qquad$


