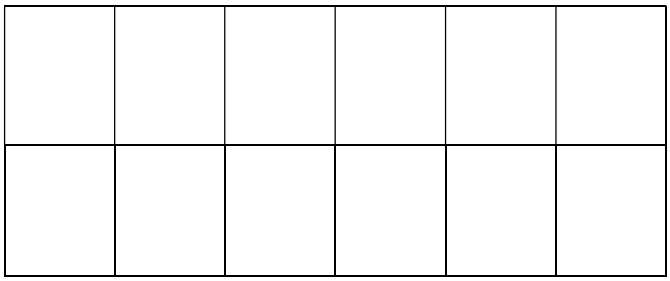
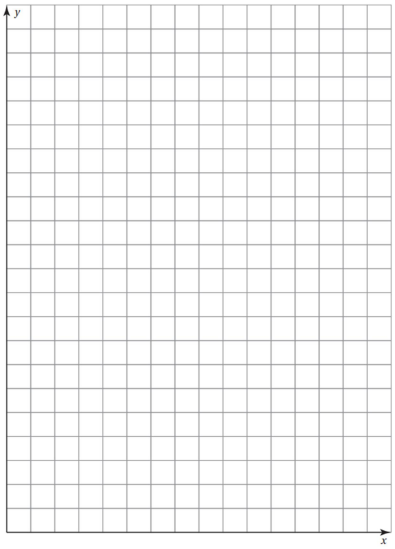
Real Life Functions

**Situation**

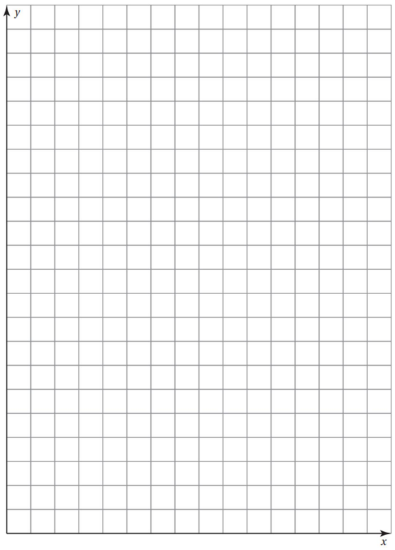
The number of packages or limes and lemons you can buy with $16 is represented by the equation 4x+2y=16. Where x represents limes and y represents lemons.

| **Represent** | **Interpret** |
|---|---|
| **Table**<br><br>  | What is the minimum number of packages you can buy?<br><br>What is the maximum number of packages you can buy? |
| **Graph**<br><br>  <br> | Does this function have a slope? If so what is it?<br><br>What does the slope mean?<br><br>What costs more limes or lemons? |
| **Linear or Nonlinear?**<br><br>Justify.<br><br>Rewrite the equation solved for y. |  |

Real Life Functions

**Situation**

The table shows the value of a motorcycle $t$ years after it is purchased.

| **Represent** | **Interpret** |
|---|---|
| **Table**<br><br>\| $t$ \| 1 \| 2 \| 3 \| 4 \|<br>\| **Value** \| \$15,360 \| \$11,520 \| \$8640 \| \$6480 \| | Approximately how much was the bike worth when it was bought? |
| **Graph**<br><br>  | Does this function have a slope? If so what is it?<br><br>What does the slope mean?<br><br>Approximately what is the bike worth at year 5? |
| **Linear or Nonlinear?**<br><br>Justify.<br><br>If linear, write an equation. |  |

Real Life Functions

**Situation**

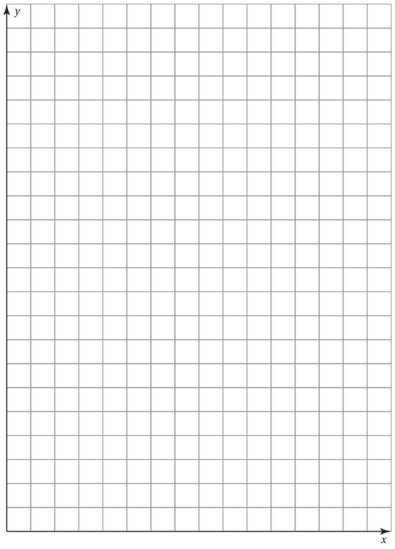
A group of friends are going bowling. Lane rental is $20 and individual equipment rental is $6.50

**Represent** **Interpret**

**Table**

| | | | | | |
|---|---|---|---|---|---|
| **Number of Bowlers (x)** | **0** | | | | |
| **Total Cost (y)** | **$20** | | | | |

**Graph**




**Linear or Nonlinear?**

Justify.

If linear, write an equation.

What does the y-intercept represent?

Does this function have a slope? If so what is it?

What does the slope mean?

What will it cost for 8 people to bowl?

Real Life Functions

**Situation**

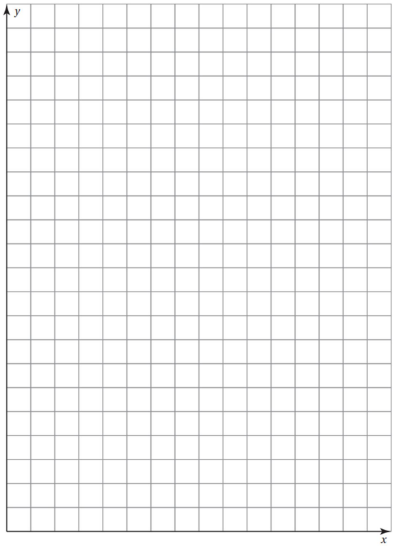
A ball is dropped from 16 feet. Each bounce is ½ of its previous height.

**Represent** **Interpret**

**Table**

| | | | | | |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |

**Graph**




**Linear or Nonlinear?**

Justify.

If linear, write an equation.

What is the y-intercept?

What does the y-intercept represent?

Does this function have a slope? If so what is it?

What does the slope mean?

How high does the ball go after 4 bounces?