## Activity 2.5



1. $y=3\left[\frac{1}{2} x\right]$

| Parameters | Geometric Transformation | Important additional Information <br> This is your personal column |
| :---: | :---: | :---: |
| $\mathrm{a}=3$ | • Vertical stretch | The vertical distance between each <br> step is 3 |
| $\mathrm{~b}=1 / 2$ | • Horizontal stretch | The length of each step is <br> $\|1 / \mathrm{b}\|$ <br> $\|1 /(1 / 2)\|$ <br> 2 |
| $(\mathrm{~h}, \mathrm{k})(0,0)$ | basic | Starting point <br> $1^{\text {st }}$ black dot |
| $a \bullet b=$ <br> positive | Steps go up |  |

1. $y=3\left[\frac{1}{2} x\right]$


$$
\text { 2. } y=-2.5\left[\frac{1}{3} x\right]
$$

| Parameters | Geometric Transformation | Important additional Information This is your personal column |
| :---: | :---: | :---: |
| $a=\underline{-2.5}$ | - Vertical stretch <br> - Reflection off the xaxis | - The vertical distance between each step is 2.5 |
| $b=1 / 3$ | Horizontal stretch | Length step $\|1 / b\|$ $\begin{gathered} \|1 /(1 / 3)\| \\ 3 \end{gathered}$ |
| (h, k) (0, 0) | basic | Starting point $1^{\text {st }}$ black dot |
| $a \bullet b=$ <br> negative | NA | Steps will go down |


3. $y=2[-0.1 x]$

| Parameters | Geometric Transformation | Important additional Information This is your personal column |
| :---: | :---: | :---: |
| $\mathrm{a}=2$ | - Vertical stretch | - The vertical distance between each step is 2 |
| $b=-0.1$ | - Horizontal stretch <br> - Reflection off y-axis | - The length of each step is \|1/b| $\|1 / 0.1\|=10$ |
| $(\mathrm{h}, \mathrm{k})(0,0)$ | basic | Starting point $1^{\text {st }}$ black dot |
| $a \bullet b=$ <br> negative | X | Steps will go down |

$$
\text { 3. } y=2[-0.1 x]
$$


4. $y=-0.5[-2 x]$

| Parameters | Geometric Transformation | Important additional Information This is your personal column |
| :---: | :---: | :---: |
| $\mathrm{a}=-0.5$ | - Vertical stretch <br> - Reflection off x - axis | - The vertical distance between each step is 0.5 |
| $b=-2$ | - Horizontal shrink <br> - Reflection off y - axis | - The length of each step is \|1/b| $\|1 / 2\|=0.5$ |
| $(\mathrm{h}, \mathrm{k})(0,0)$ | basic | Starting point $1^{\text {st }}$ black dot |
| $a \bullet b=$ <br> down | X | Steps will go up |

$$
\text { 4. } y=-0.5[-2 x]
$$



$$
\text { 5. } y=-6[4 x]
$$

| Parameters | Geometric Transformation | Important additional Information This is your personal column |
| :---: | :---: | :---: |
| $a=-6$ | - Vertical stretch <br> - Reflection off x - axis | - The vertical distance between each step is 6 |
| $b=4$ | - Horizontal shrink | - The length of each step is \| $1 / \mathrm{b}$ \| $\|1 / 4\|=0.25$ |
| $(\mathrm{h}, \mathrm{k})(0,0)$ | basic | Starting point $1^{\text {st }}$ black dot |
| $a \bullet b=$ negative | NA | Steps will go down |

## 5.

$y=-6[4 x]$

|  |  |  |  |  |  |  | 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| - |  |  |  |  |  |  | 10 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 8 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | -60 |
| - |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 4. |
| - |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 2 |
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|  |  |  |  |  |  |  |  |
| - |  |  | -1 |  |  |  | 0 |
|  |  |  |  |  |  |  | -2 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | -4 |
| - | $\checkmark$ |  |  |  |  |  |  |
|  |  |  |  |  |  |  | -6 |
| - |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | -8 |
| - |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | -10 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | -12 |

6. $y=1.5\left[-\frac{1}{2} x\right]$

| Parameters | Geometric Transformation | Important additional Information This is your personal column |
| :---: | :---: | :---: |
| $\mathrm{a}=1.5$ | - Vertical stretch | - The vertical distance between each step is 1.5 |
| $b=-1 / 2$ | - Horizontal shrink <br> - Reflection off $y$ - axis | $\xrightarrow{\text { The length of each step is }} \left\lvert\, \begin{gathered}\|1 / \mathrm{b}\| \\ \|1 / 1 / 2\|=2\end{gathered}\right.$ |
| (h, k) (0, 0) | basic | Starting point $1^{\text {st }}$ black dot |
| $a \bullet b=$ <br> negative | NA | Steps will go down |



$$
\text { 7. } y=-2\left[-\frac{1}{4} x\right]
$$

| Parameters | Geometric Transformation | Important additional Information This is your personal column |
| :---: | :---: | :---: |
| $\mathrm{a}=-2$ | - Vertical stretch <br> - reflection off $x$ - axis | - The vertical distance between each step is 2 |
| $b=-1 / 2$ | - Horizontal stretch <br> - Reflection off $y$ - axis | - The length of each step is \|1/b| $\|1 / 1 / 4\|=4$ |
| $(\mathrm{h}, \mathrm{k})(0,0)$ | basic | Starting point $1^{\text {st }}$ black dot |
| $a \bullet b=$ <br> positive | NA | Steps will go up |



$$
\text { 8. } y=4[0.2 x]
$$

\(\left.\left.$$
\begin{array}{|c|c|c|}\hline \text { Parameters } & \text { Geometric Transformation } & \begin{array}{c}\text { Important additional Information } \\
\text { This is your personal column }\end{array} \\
\hline \mathrm{a}=4 & \text { • Vertical stretch } & \begin{array}{c}\text { The vertical distance between } \\
\text { each step is } 4\end{array} \\
\hline \mathrm{~b}=0.2 & \text { • Horizontal stretch } & \text { The length of each step is } \\
|1 / \mathrm{b}| \\
|1 / 0.2|=5\end{array}
$$ \right\rvert\, \begin{array}{c}Starting point <br>

1^{st} black dot\end{array}\right\}\)| Steps will go up |
| :---: |
| $(\mathrm{h}, \mathrm{k})(0,0)$ |



