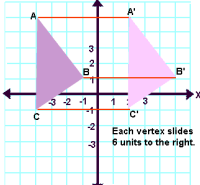
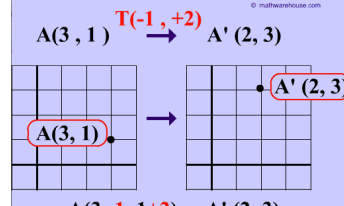
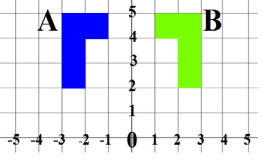
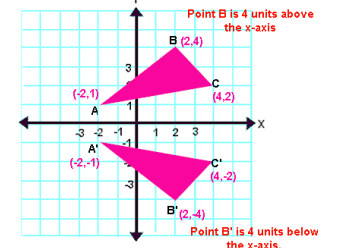
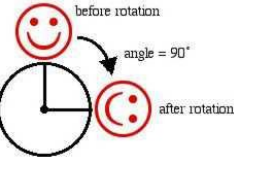
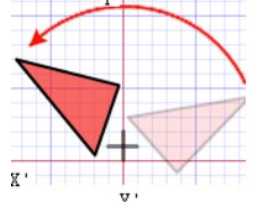
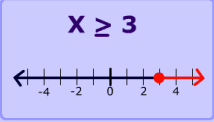
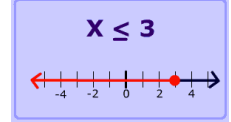
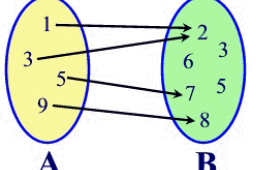
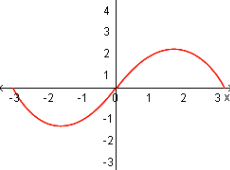
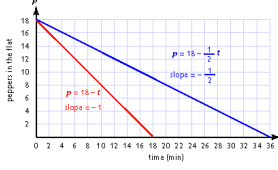
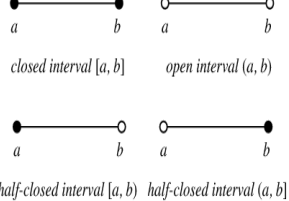
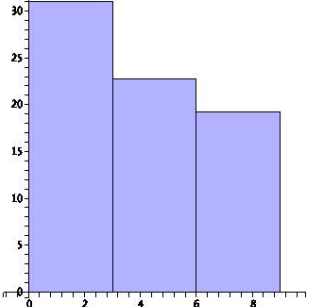
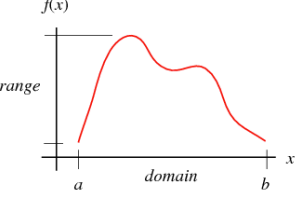
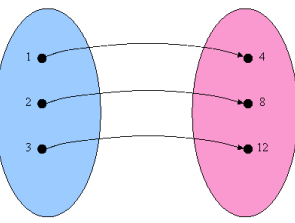
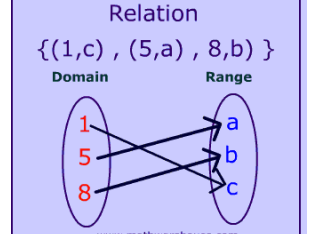
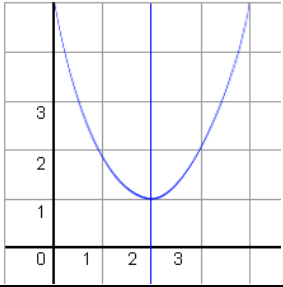
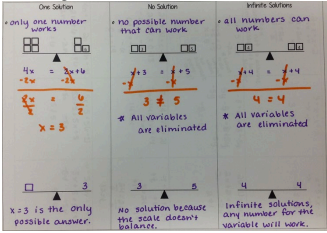
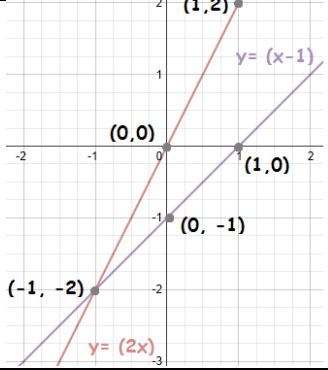
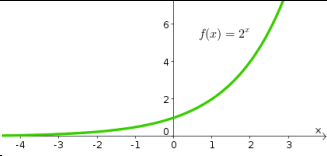
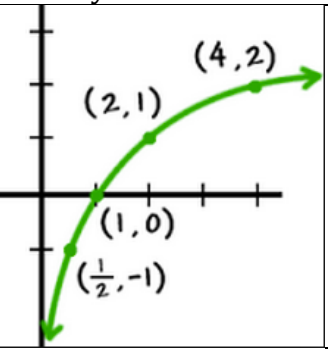
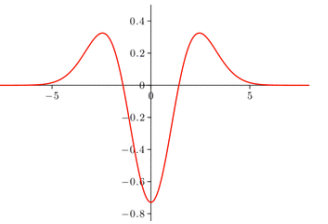
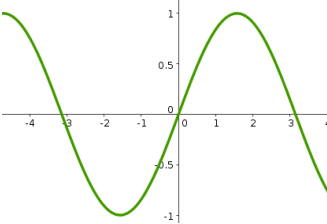
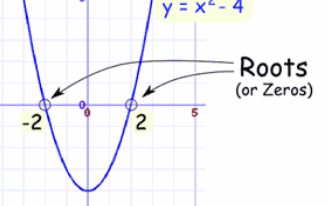


| | CONCEPT | EXAMPLE | | | | | | | | | | | | | | | | | | |
|------------------|--|---|--|-----------|---------|---|----------|---|-----------|---|-----------|---|-----------|----|-----------|---|-----------|---|-----------|---|
| Middle School | Translation |  |  <p>$A(3, 1) \xrightarrow{T(-1, +2)} A'(2, 3)$</p> <p>$A(3, 1) \xrightarrow{T(-1, +2)} A'(2, 3)$</p> | | | | | | | | | | | | | | | | | |
| | Reflection |  |  <p>Point B is 4 units above the x-axis</p> <p>Point B' is 4 units below the x-axis.</p> | | | | | | | | | | | | | | | | | |
| | Rotation |  <p>before rotation</p> <p>angle = 90°</p> <p>after rotation</p> |  | | | | | | | | | | | | | | | | | |
| | Inequality |  <p>$x \geq 3$</p> |  <p>$x \leq 3$</p> | | | | | | | | | | | | | | | | | |
| | Function |  |  <p>$g(x) = 2x^2 - 5x + 3$</p> | | | | | | | | | | | | | | | | | |
| | Linear | <p>$-3x + 5y = 11$</p>  | <table border="1" data-bbox="1144 1207 1323 1396"> <thead> <tr> <th>X</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>2</td> <td>0.5</td> </tr> <tr> <td>3</td> <td>-1</td> </tr> <tr> <td>4</td> <td>-2.5</td> </tr> </tbody> </table> | X | Y | 1 | 2 | 2 | 0.5 | 3 | -1 | 4 | -2.5 | | | | | | | |
| | X | Y | | | | | | | | | | | | | | | | | | |
| | 1 | 2 | | | | | | | | | | | | | | | | | | |
| 2 | 0.5 | | | | | | | | | | | | | | | | | | | |
| 3 | -1 | | | | | | | | | | | | | | | | | | | |
| 4 | -2.5 | | | | | | | | | | | | | | | | | | | |
| Interval |  <p>closed interval $[a, b]$ open interval (a, b)</p> <p>half-closed interval $[a, b)$ half-closed interval $(a, b]$</p>  | <table border="1" data-bbox="1144 1407 1421 1711"> <thead> <tr> <th>Class interval</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>91 – 98</td> <td>2</td> </tr> <tr> <td>99 – 106</td> <td>6</td> </tr> <tr> <td>107 – 114</td> <td>4</td> </tr> <tr> <td>115 – 122</td> <td>5</td> </tr> <tr> <td>123 – 130</td> <td>18</td> </tr> <tr> <td>131 – 138</td> <td>7</td> </tr> <tr> <td>139 – 146</td> <td>4</td> </tr> <tr> <td>147 – 154</td> <td>4</td> </tr> </tbody> </table> | Class interval | Frequency | 91 – 98 | 2 | 99 – 106 | 6 | 107 – 114 | 4 | 115 – 122 | 5 | 123 – 130 | 18 | 131 – 138 | 7 | 139 – 146 | 4 | 147 – 154 | 4 |
| Class interval | Frequency | | | | | | | | | | | | | | | | | | | |
| 91 – 98 | 2 | | | | | | | | | | | | | | | | | | | |
| 99 – 106 | 6 | | | | | | | | | | | | | | | | | | | |
| 107 – 114 | 4 | | | | | | | | | | | | | | | | | | | |
| 115 – 122 | 5 | | | | | | | | | | | | | | | | | | | |
| 123 – 130 | 18 | | | | | | | | | | | | | | | | | | | |
| 131 – 138 | 7 | | | | | | | | | | | | | | | | | | | |
| 139 – 146 | 4 | | | | | | | | | | | | | | | | | | | |
| 147 – 154 | 4 | | | | | | | | | | | | | | | | | | | |
| Domain/ Range |   | <p>Relation</p> <p>$\{(1, c), (5, a), (8, b)\}$</p>  <p>www.mathwarehouse.com</p> | | | | | | | | | | | | | | | | | | |

| | CONCEPT | EXAMPLE | | |
|-------------|-------------|---|--|---|
| High School | Quadratic |  | $4x^2 - 11x + 17 = y$ | $f(x) = x^2 - 25$ |
| | Solution | $X = 5$ | One Solution - No Solution - Infinitely Many Solutions  |  |
| | Exponential | $(3^2)^{3x} = (3^3)^{x+1}$ |  | $15e^{1-3z} = 3$ |
| | Polynomial | $3x^2 + 5y - 11z = 23$ | $6x^4 - 3 = 2y^2 + y + 1$ | $(x^2 + 6)(x + 2)$ |
| | Logarithm |  | $\log_b \frac{m}{n} = \log_b m - \log_b n$ | $\log_2 8^x = x \cdot \log_2 8$ |
| | Function |  |  | $f(x) = 35x + 7$ |
| | Zeros/Roots |  | $x = \frac{-1 \pm \sqrt{1^2 - 4(1)(1)}}{2(1)} = \frac{-1 \pm \sqrt{-3}}{2}$ $= \frac{-1 \pm \sqrt{3}i}{2}$ | $5x = 0 \Rightarrow x = 0$ $x - 2 = 0 \Rightarrow x = 2$ $x + 1 = 0 \Rightarrow x = -1$ |

| NON-EXAMPLE (TOPIC) | | | | |
|---------------------|--|--|--|--|
| Middle/High School | Quadratic Formula | $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ | | |
| | Volume Formula for a Cylinder | $V = \pi r^2 h$ | | |
| | Pythagorean Theorem | $A^2 + B^2 = C^2$ | | |
| | Alternate Interior Angles Theorem | When two parallel lines are cut by a transversal, the resulting alternate interior angles are congruent. | | |
| | Symmetric Property | If $a = b$, then $b = a$. | | |



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