Quadratic Functions

1. The rule of a quadratic function is $y=4x^{2}$. Complete the table of values for this function.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| X | 1 | 3 | 4 | 5 | 6 |  |  |  |  |
| Y |  |  |  |  |  | 196 | 400 | 576 | 1600 |

1. The rule of a quadratic function is $y=\frac{1}{2}x^{2}$. Complete the table of values for this function.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| X | 0 | 1 |  |  | 6 | 8 |  |  | 15 |
| Y |  |  | 2 | 4.5 |  |  | 50 | 72 |  |

1. A real estate agent sells square-shaped lots. The cost of each lot is $10 per m2.
2. Find the rule of the function which associates the measure of the side with the cost of the lot?
3. Complete the table of values of the function

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| X | 0 | 10 | 15 | 20 | 30 |
| Y |  |  |  |  |  |

1. A square-based prism has a height equal to 25 cm. Let *x* represent the length of the base’s edge.
2. Find the rule of the function which associates the length of the base’s edge with the volume of the prism.
3. If the prism had an edge of 15cm, what is the volume of the prism?
4. If the volume of the prism is 3600 cm3, what is the length of the base’s edge?
5. The distance y (in m) traveled by a free-falling objects as a function of the time x (in sec) elapsed since it was dripped is described by the rule y$=4.9x^{2}$.
6. Complete the table of values

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| t | 0 | 1 | 2 | 3 | 4 |
|  |  |  |  |  |  |

1. After how many seconds, rounded to the nearest unit, will the object hit the ground if it was dropped from a height of 180m?
2. A real estate agent is selling square-shaped lots. A lot with sides of length 25 m is sold for $11250.
3. What is the rule of the function which associates the length of the side of the lot with its cost?
4. What is the cost of a lot with sides 20m?
5. What is the side length of a lot sold for $16 200?
6. OLD EXAM QUESTION

