Key Concept Questions:

1) What is true about the finite differences of a linear relation?

2) What is true about the finite differences of a quadratic relation?

3) Can you identify the following properties of any parabola? Try it with the one provided.

|  |  |
| --- | --- |
| Vertex |  |
| x-intercepts |  |
| y-intercept |  |
| Axis of Symmetry |  |
| Dir. of Opening |  |
| Step Pattern |  |



4) When investigating relations of the form $y=a\left(x-h\right)^{2}+k$ when would you see the following transformations?

a) A horizontal shift to the left?

b) A horizontal shift to the right?

c) A vertical shift up?

d) A vertical shift down?

e) A vertical stretch?

f) A vertical compression?

g) A reflection in the x-axis

5) What does the vertex form of a quadratic relation look like? What does this form tell you about a parabola?

6) What does the factored form of a quadratic relation look like? What does this form tell you about a parabola?

7) What does the standard form of a quadratic relation look like? What does this form tell you about a parabola?

8) How can you find the axis of symmetry of a parabola using the x-intercepts?

9) Do all quadratic relations have a factored form? Why or why not? Do all quadratic relations have a vertex form and standard form?

10) What does the acronym FOIL stand for when expanding and simplifying?

11) What is the rule for powers where the exponent is 0? How would you explain this rule to a friend?

12) What is the rule for powers with a negative exponent?

Text Review Questions:

p. 202 #3, 4, 5, 6, 7, 8, 9, 10

p. 204 #1, 2, 3, 4, 6, 7, 8, 9, 10

p. 256 #1, 2, 3



