Unit 3B Test: Zeros of a Quadratic (2022)

Grading:
knowledge and understanding: ?
application: ?
thinking: ?
communication: 4 + 2 (form)

(1) Solve the equation $2(x-1)^2 - 8 = 0$ [A][3].

(2) Determine the equations of the parabola in vertex form for the following

a.) If the vertex of a parabola is $(3, -5)$ and the y-intercept is at $y = 8$ [T][3].

b.) If the parabola $y = x^2$ is stretched by a factor of 5, moved 6 units to the right, and moved 7 units down [T][2].

(3) Rewrite the equation $y = 2x^2 + 8x + 3$ in vertex form and also sketch it [A][3].

(4) Sketch the parabola $y = 2(x+3)^2 - 2$. The sketch must include the x-intercept(s), y-intercept, and vertex of the parabola [A][3].

(5) For the parabola $y = 3(x-5)^2 - 6$

a.) Identify the equation for the axis of symmetry, the max/min, and the vertex [K/U][3].

b.) Describe the transformation of the parabola [C][4].

c.) Determine the x-intercept of the parabola [K/U][2].