

## Algebra I Homework #21 – Answer Key

- 1)  $\frac{x-15}{13x-57} \quad x \neq 3, 6, \frac{57}{13}$
- 2)  $(9y-1)(3a-5y)$
- 3) No Solutions  $x \neq 2, -15$
- 4)  $15x^3y^5\sqrt[5]{3x}$
- 5)  $\frac{1}{(x-3)(x-4)} \quad x \neq -3, 3, 4$
- 6)  $k = \frac{12xy}{7x+5m} \quad 7x \neq -5m$
- 7) The rocket was launched 3 miles away from the control tower, it crashed 7 miles down range, it was 5 miles down range when it got to its maximum height, and the rocket's maximum height was 4 miles.
- 8)  $x = \frac{35m+2ya}{6y} \quad y \neq 0$
- 9) The rocket was launched 5 miles away from the control tower, it crashed 11 miles down range, it was 8 miles down range when it got to its maximum height, and the rocket's maximum height was 9 miles.
- 10)  $m = \frac{3ay}{8x-11a} \quad 8x \neq 11a$
- 11) The rocket was launched 3 miles away from the control tower, it crashed 9 miles down range, it was 6 miles down range when it got to its maximum height, and the rocket's maximum height was 9 miles.
- 12)  $b_2 = \frac{2A-hb_1}{h} \quad h \neq 0$
- 13) The rocket was launched 4 miles away from the control tower, it crashed 12 miles down range, it was 8 miles down range when it got to its maximum height, and the rocket's maximum height was 16 miles.

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- 14)  $y = \frac{15xm}{16m + 2x} \quad 2x \neq -16m, y \neq 0, x \neq 0, m \neq 0$
- 15) The rocket was launched 6 miles away from the control tower, it crashed 16 miles down range, it was 11 miles down range when it got to its maximum height, and the rocket's maximum height was 25 miles.
- 16)  $x = \frac{16m - 5ya}{-15y} \quad y \neq 0$
- 17) The rocket was launched 10 miles away from the control tower, it crashed 14 miles down range, it was 12 miles down range when it got to its maximum height, and the rocket's maximum height was 4 miles.
- 18)  $a = \frac{xy}{y + x} \quad x \neq -y, x \neq 0, y \neq 0, a \neq 0$
- 19) The rocket was launched 2 miles away from the control tower, it crashed 8 miles down range, it was 5 miles down range when it got to its maximum height, and the rocket's maximum height was 9 miles.
- 20)  $y = \frac{5mx - 8xa}{7a} \quad a \neq 0$

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