

# NTI Instructions

## Days 1-10

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Communication is a required part of the assignment.

2) The problem must be written and work shown. Answers only will not count.

**Day 1:** 1-20 These are numeric problems. Use Order of Operations to solve.

21-40 These involve a percent change of increase or decrease.

Example: From 25 to 36

Solution: Since the value goes up, it is an increase.

$$25 \times \% = 36$$

$$\% = 36/25 = 1.44 = 144\%$$

**Day 2:** 1-20 Simplifying exponents.

Base x base: add exponents  $b^2 \times b^4 = b^6$

Making exponents positive: change position  $z^{-3} = 1/z^3$

21-40 Scientific notation: Change numbers written in scientific notation back into standard form.

**Day 3:** Simplify square roots, do not simply convert to decimals. Only bring out the factors that have perfect roots. When combining roots, the roots have to be the same before terms can be combined. To solve an equation involving roots, first isolate the root, then square both sides in order to complete the solution.

**Day 4:** 1-10 Simplify by combining like terms

11-20 Use FOIL to find each product

21-40 Factor each trinomial by factoring out a GCF and undoing FOIL.

**Day 5:** Factor each expression, reduce and simplify.

**Day 6:** 1-20 Solve each multi-step equation

21-40 Solve each multi-step inequality, then graph the solution on the number line.

**Day 7:** 1-6 Use the graph to write the equation of the line in  $y = mx + b$  form.

7-12 Use the slope and intercept to write the equation in  $y = mx + b$  form.

13-30 Start with Point-Slope  $y - y_1 = m(x - x_1)$  and solve to slope-intercept  $y = mx + b$ .

31-40 Use the two points to find the slope, then start with point-slope and finish with slope-intercept.

**Day 8:** 1-36 Solve the quadratic equations by factoring, taking the roots and the quadratic formula as indicated.

37-40 Graph each quadratic equation using roots and axis of symmetry.

**Day 9:** Solve each system by elimination, substitution, or graphing as indicated.

**Day 10:** 1-16 Solve the absolute value, two answers.

17-28 Graph the solution, either a conjunction or a disjunction.

29-40 Graph each absolute value equation, v- shape.