Grade 9
Distance Learning Module 2: Multiplying Polynomials and Introduction to Factoring
Week of: April 6, 2020 - April 9, 2020

Mathematics: Algebra I, Level 2 - *Modified from Unit F - Beyond Straight Lines*

Targeted Goals from Stage 1: Desired Results

Content Knowledge: factoring and distributing are inverse operations, some binomials $(x + a)(x - a)$ and $(x + c)^2$ can be quickly multiplied using patterns

Vocabulary: square of a binomial, difference of squares, GCF (greatest common factor), perfect square trinomial, factoring

Skills: multiplying binomials, factoring (distributive property), factoring $x^2 + bx + c$ expressions

Expectation:

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: Factoring out the GCF	Factoring out the GCF video tutorial (YouTube)	Factoring out GCF Practice (PIZZAZZ p. 80) Factoring out GCF Practice (PIZZAZZ p. 81) Students: Copy problems onto lined paper and do work out. Take a picture of your work and submit to Google Classroom.
Tuesday: Multiplying binomials by binomials	Khan Academy: Multiplying binomials: area model (video) Multiplying binomials intro (video) Warmup: Multiplying binomials (article) Multiplying binomials (video)	Khan Academy: Multiply binomials: area model (practice) Multiply binomials intro (practice) Multiply binomials (practice)

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Wednesday: Multiplying binomials by binomials (special cases/patterns)	Khan Academy: Special products of the form (x+a)(x-a) (video) Squaring binomials of the form (x+a)^2 (video) Special products of the form (ax+b)(ax-b) (video) Squaring binomials of the form (ax+b)^2 (video)	Khan Academy: Multiply difference of squares (practice) Multiply perfect squares of binomials (practice) Binomial special products (review) Multiplying Special Products worksheet Do your work for this worksheet on lined paper. Then take a clear picture of it and submit to Google Classroom.
Thursday: Factoring trinomials with a leading coefficient of 1	Khan Academy: Factoring quadratics as (x+a)(x+b) (video) Factoring quadratics as (x+a)(x+b) Ex. 2 (video) More examples of factoring quadratics as (x+a)(x+b) (video)	Khan Academy: Factoring quadratics: leading coefficient = 1 (guided lesson) Factoring quadratics intro (practice) Factoring quadratics with a common factor (GCF) (practice)
Friday: No School (Good Friday)	No School	No School

Week criteria for success (attach student checklists or rubrics):

By the end of this module, students will be able to:

- factor the GCF out of an expression - rewrite it as the product of a monomial and polynomial.
- multiply two binomials (using the area model, the distributive property, and the FOIL algorithm).
- apply special patterns to multiply two binomials for a product that is a difference of squares or a perfect square trinomial.
- factor quadratic trinomials in the form $x^2 + bx + c$ (with a leading coefficient of 1).

Supportive resources and tutorials for the week (plans for re-teaching): Khan Academy, Kuta Software worksheets, office hours

Another video for factoring trinomials with a leading coefficient of 1 (note: at around 7.5 minutes, there is an extension - factoring out a GCF **first**)