	Simplify $12 - 3(9 - 12)$ $12-3(-3)$ $12-(-9)$ 21 $16 - 6(7 - 13)$ $16-6(-6)$ $16+36$ 52 $16-(-36)$ $12(-9) \div (-3)^3$ $-108 \div (-27)$ 4 $-30 \div 2 + (-3)(-7)$ $-15+21$ 6 Evaluate the following when $x = -5$ $2x^2 + 3x + 8$ $2(-5)^2+3(-5)+8$ $2(25)+(-15)+8$ $50+(-15)+8$ 43 $-3x^2 - 2x + 6$ $-3(-5)^2-2(-5)+6$ $-3(25)-(-10)+6$ $-75+10+6$ -59
Translate Phrases to Expression with integers	Trasnlate and simplify the sum of eight and negative twelve, increased by three $(8+(-12))+3$ $-4+3=-1$ Translate and simplify the differnce of negative eight and negative twleve, increased by nine. $(-8-(-12))+9$ $4+9$ 13

	The tempuratures in Urbana, Illinois one morning was 11 degrees. By mid-afternoon, the temperature had dropped to –9 degrees. What was the different of the morning and afternoon temperatures? $11-(-9)=20$ The Mustanges football team received three penalties in the third quarter. Each penalty gave them a loss of fifteen yards. What was the number of yards lost? $3(-15)=-45$ yds Bill uses the ATM on campus because it is convenient. However, each time he uses it he is charged a $2 fee. Last month he used the ATM eight times. How much was his total fee for using the ATM? $-2(8)=-\$16$ At the first down, the Chargers had the ball on their 25 yard line. On the next three downs, they lost 6 yards, gained 10 yards, and lost eight yards. What was the yard line at the end of the fourth down? $25-6=19+10=29-8=$ 21 yd line Mayra has $124 in her checking account. She writes a check for $152. What is her new balance in her checking account. $124-152=-\$28$

What you will learn about:
Visualize Fractions

Equivalent Factions

Fraction $\frac{a}{b}, where\ b = 0.$

- a is the numberator and b is the demoninator

Property of one

Any number divided by itself is 1

Equivalent Fractions

Factions that have the same value

Equivalent Fractions Property

$\frac{a}{b} = \frac{a}{b} \cdot \frac{c}{c}$

Find three fractions equvilent to $\frac{2}{5}$.

$\frac{4}{10}, \frac{6}{15}, \frac{20}{50}$

Find three fractions equivlent to $\frac{5}{8}$.

$\frac{10}{16}, \frac{50}{80}, \frac{500}{800}$

Simplified Fraction

If there are no common factors other than 1 in numberator and denominator

Simplify: $-\frac{32}{56} = -\frac{4}{7}$

Simplify:

$-\frac{42}{54} - \frac{7}{9}$ $\quad \frac{45}{81} = \frac{5}{9}$ $\quad \frac{36}{48} = \frac{6}{8} = \frac{3}{4}$

Using Prime Numbers it Simplify Fractions

Simplify

$-\frac{210}{385}$

$-\frac{2 \cdot 3 \cdot 5 \cdot 7}{5 \cdot 7 \cdot 11}$

$-\frac{6}{11}$

$\frac{5x}{5y} = \frac{x}{y}$

69: 3, 23 — 120: 12, 10; 3, 4, 5, 2, 2

$\frac{69}{120}$

$\frac{3 \cdot 23}{2 \cdot 2 \cdot 2 \cdot 3 \cdot 5}$

$\frac{23}{40}$

$\frac{7x}{7y} = \frac{x}{y}$

192: 2, 96; 2, 48; 2, 24; 2, 12; 2, 6; 2, 3

$-\frac{120}{192}$

$-\frac{2 \cdot 2 \cdot 2 \cdot 3 \cdot 5}{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 3}$

$-\frac{5}{8}$

Fraction Multiplication

$-\frac{11}{12} \cdot \frac{5}{7} = -\frac{55}{84}$

$-\frac{\cancel{10}^{2}}{\cancel{28}_{7}} \cdot \frac{\cancel{8}^{2}}{\cancel{15}_{3}} = -\frac{16}{420}$

$-\frac{8}{42}$

$-\frac{4}{21}$

$-\frac{4}{21}$

$\frac{\cancel{8}^{2}}{\cancel{20}_{4}} \cdot \frac{\cancel{3}^{1}}{\cancel{12}_{4}} = \frac{45}{240}$

$= \frac{3 \cdot 3 \cdot \cancel{5}}{2 \cdot 2 \cdot 2 \cdot 2 \cdot \cancel{5}}$

$\frac{3}{16}$

$\frac{3}{16}$

4
28
15
140
280
420

48
5)240
20
40

$-\frac{12}{5}(-20x)$

$\left(-\frac{12}{5}\right)\left(-\frac{20x}{1}\right)$

$48x$

$\frac{11}{3}(-9a)$

$\left(\frac{11}{3}\right)\left(-\frac{9a}{1}\right) = -\frac{99a}{3}$

$-33a$

240: 24, 10; 8, 3; 5, 2

Dividing Fractions

Reciprocal

Flip the fraction

Copy Dot Flip

Keep Change Change

Mult by reciprocal

Complex Fraction

Divide:

$-\frac{2}{3} \div \frac{n}{5}$

$-\frac{2}{3} \cdot \frac{5}{n}$

$-\frac{10}{3n}$

$-\frac{7}{8} \div \left(-\frac{14}{27}\right)$

$-\frac{1}{\cancel{8}} \cdot -\frac{27}{\cancel{14}_{2}}$

$\frac{27}{16}$

$-\frac{7}{27} \div \left(-\frac{35}{36}\right)$

$-\frac{7}{27} \cdot \left(-\frac{36}{35}\right)$

$\frac{4}{15}$

Simplilfy

$\frac{\frac{3}{4}}{\frac{5}{8}}$ $\quad \frac{3}{4} \div \frac{5}{8}$

$\frac{3}{4} \cdot \frac{8}{5}$

$\frac{6}{5}$

$\frac{\frac{12}{15}}{\frac{6}{1}}$ $\quad \frac{12}{15} \div \frac{6}{1}$

$\frac{12}{15} \cdot \frac{1}{6} = \frac{12}{90}$

$\frac{2}{15}$

$\frac{\frac{x}{2}}{\frac{xy}{6}}$ $\quad \frac{x}{2} \div \frac{xy}{6}$

$\frac{x}{2} \cdot \frac{6}{xy} = \frac{6x}{2xy}$

$= \frac{3}{y}$

Simplify

$\frac{4-2(3)}{2^2+2} = \frac{4-6}{4+2}$

$= \frac{-2}{6}$

$= -\frac{1}{3}$

$\frac{3^3-2(-4)}{4^2+4} = \frac{27-(-8)}{16+4}$

$= \frac{35}{20}$

$= \frac{7}{4}$

Placement of Negative Sign in a Fraction $-\frac{a}{b}$ $\frac{a}{-b}$ $-\frac{a}{b}$	Simplify: $\frac{4(-3)+6(-2)}{-3(2)-2} = \frac{-24}{-8} = 3$ $\frac{8(-2)+4(-3)}{-5(2)+3} = \frac{-16+-12}{-7} = \frac{-28}{-7} = 4$
Translate Phrase to Expressions with Factions	Translate the English phrase into an alegraic expression: the quotient of the difference of m and n, and p. Translate the English phrase into an alegraic expression: the quotient of the difference of a and b, and cd. Translate the English phrase into an alegraic expression: the quotient of A and the difference 3 and B.

	A recipe for chocoate chip cookies calls for $\frac{3}{4}$ cup brown sugar. Imelda wants to double the recipe. How much brown sugar will Imelda need? Show your calculation. Nina is making 4 pans of fudge to serve after a music recital. For each pan, she needs $\frac{2}{3}$ cup of condensed milk. How much condensed milk will Nina need? Show your caluclation. Measuring cups usually come in sets of $\frac{1}{4}, \frac{1}{3}, \frac{1}{2}, and\ 1$ cup. Draw a diagram to show two different ways that Nina could measure the condensed milk needed for 4 pans of fudge. Kristen has $\frac{3}{4}$ yards of ribbon that she want to cup into 6 equal parts to make hair ribbons for her daughter's dolls. How long wil each ribbon be? Rafael wanted to order half a medium pizza at a resturant. The waiter told him that a medium pizza could be cut into 6 or 8 slices. Would he prefer 3 out of 6 slices or 4 out of eight slices? Rafael replied that since he wan't very hungry, he would prefer 3 out of 6 slices. Explain what is wrong with Rafaels's reasoning.