Name:_____

Big Bend Community College

Emporium Model
Math 98 Course
Workbook

A workbook to supplement
video lectures and online homework by:

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Conversion Factors

LENGTH	
English 12 in = 1 ft 3 ft = 1 yd 1 mi = 5280 ft	**Metric (meter)** 1000 mm = 1 m 100 cm = 1 m 10 dm = 1 m 1 dam = 10 m 1 hm = 100 m 1 km = 1000 m
English to Metric 1 in = 2.54 cm	

TEMPERATURE
$C = \frac{5(F-32)}{9}$
$F = \frac{9}{5}C + 32$

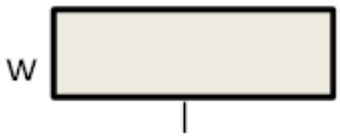
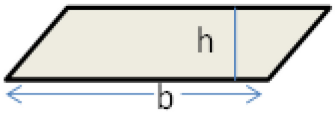
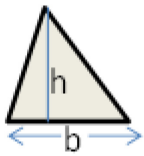
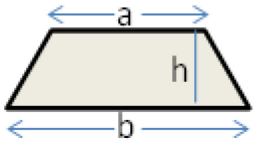
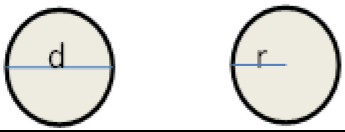
VOLUME	
English 8 fl oz = 1 cup (c) 2 cups (c) = 1 pint (pt) 2 pints (pt) = 1 quart (qt) 4 quarts (qt) = 1 gallon (gal)	**Metric (liter)** 1000 mL = 1 L 100 cL = 1 L 10 dL = 1 L 1 daL = 10 L 1 hL = 100 L 1 kL = 1000 L 1 mL = 1 cc = 1 cm^3
English to Metric 1 gallon (gal) = 3.79 liter (L) $1in^3$ = 16.39 mL	

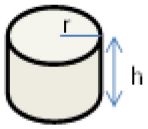
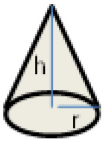
TIME
60 seconds (sec) = 1 minute (min)
60 minutes (min) = 1 hour (hr)
24 hours (hr) = 1 day
52 weeks = 1 year
365 days = 1 year

WEIGHT (MASS)	
English 16 oz = 1 pound (lb) 2,000 lb = 1 Ton (T)	**Metric (gram)** 1000 mg = 1 g 100 cg = 1 g 10 dg = 1 g 1 dag = 10 g 1 hg = 100 g 1 kg = 1000 g
English to Metric 2.20 lb = 1 kg	

INTEREST
Simple: $\mathrm{I} = \mathrm{Prt}$
Continuous: $\mathrm{A} = \mathrm{Pe}^{\mathrm{rt}}$
Compound: $\mathrm{A} = \mathrm{P}\left(1+\frac{\mathrm{r}}{\mathrm{n}}\right)^{\mathrm{nt}}$
Annual: $n = 1$
Semiannual: $n = 2$
Quarterly: $n = 4$

Geometric Formulas

Name	Diagram	Area
Rectangle		$A = lw$ $P = 2l + 2w$
Parallelogram		$A = bh$
Triangle		$A = \frac{1}{2}bh$
Trapezoid		$A = \frac{1}{2}h(a + b)$
Circle		$A = \pi r^2$ $C = \pi d = 2\pi r$

Name	Diagram	Volume
Rectangular Solid		$V = lwh$
Right Circular Cylinder		$V = \pi r^2 h$
Right Circular Cone		$V = \frac{1}{3}\pi r^2 h$
Sphere		$V = \frac{4}{3}\pi r^3$

Right Triangle

Pythagorean Theorem: $a^2 + b^2 = c^2$

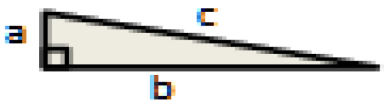


Table of Contents

Unit 7:
Linear Equations and Applications

To work through the unit, you should:

1. Watch a video, as you watch, fill out the workbook (top and example sections).
2. Complete Q1 and Q2 in WAMAP, put your work in the right column of the page.
3. Repeat #1 and #2 with each page until you reach the  .
4. Complete the homework assignment on your own paper.
5. Repeat #1 thru #4 until you reach the end of the unit.
6. Complete the review/practice test on your own paper.
7. Take the unit exam.

7.1 Order of Operations

7.1a The Order

The Order:

1.

2.

3.

4.

To remember:

Example 1:

$$5-3\left(2+4^2\right)$$

Example 2:

$$30\div5+\left(4-7\right)^2$$

Q1:

Q2:

7.1b Lots of Parentheses

Different types of parenthesis:

Always do _____ first!

Example 1:

$$(4+2)-\left[5^2 \div (2+3)\right]$$

Example 2:

$$7\left\{2+2\left[20 \div (4+6)\right]\right\}$$

Q1:

Q2

7.1c Fractions

When simplifying fractions, always simplify _____ and _____ first.

Only reduce after the rest has been _____.

Example 1:

$$\frac{(4+5)(2-9)}{2^3-(2^2+3)}$$

Q1:

Example 2:

$$\frac{-4^2-(4+2\bullet 3)}{5+3(5-4)}$$

Q2:

7.1d Absolute Value

Absolute values work just like _____ but makes the number inside _____ after it has been _____.

Example 1:

$$-3\left|2^4-(5+4)^2\right|$$

Q1:

Example 2:

$$2-4\left|3^2+\left(5^2-6^2\right)\right|$$

Q2:

You have completed the videos for 7.1 Order of Operations. On your own paper, complete the homework assignment.

7.2 Evaluate and Simplify Algebraic Expressions

7.2a Substitute a Value

Replace the _____ with what it _____.

Whenever we make a substitution or _____ put it in _____.

Example 1:

Evaluate $4x^2 - 3x + 2$

When $x = -3$

Q1:

Example 2:

Evaluate $4b(2x + 3y)$

When $b = -2, x = 5, y = -7$

Q2:

7.2b Combine Like Terms

Terms are _____ and _____ that are _____ together.

Like terms are terms that have matching _____ and _____.

Combine like terms: _____ the coefficients from the _____.

Example 1:

$$4x^3 - 2x^2 + 5x^3 + 2x - 4x^2 - 6x$$

Q1:

Example 2:

$$4y - 2x + 5 - 6y + 7y - 9$$

Q2:

7.2c Distributive Property

Distributive Property: $a(b+c)=$

Example 1:

$$-2(5x-4y+3)$$

Example 2:

$$4(7x^2-6x+1)$$

Q1:

Q2:

7.2d Distribute and Combine Like Terms

Order of operations states we _____ before we _____.

Therefore, we will _____ first and then _____ second.

Example 1:

$$4(3x-7)-7(2x-1)$$

Q1:

Example 2:

$$2(7x-3)-(8x+9)$$

Q2:

You have completed the videos for 7.2 Evaluate and Simplify Algebraic Expressions. On your own paper, complete the homework assignment.

7.3 Solve Linear Equations

7.3a Variable on Both Sides

Move the variable to one side by _____.

Solve remaining two step equation by _____ first and _____ second.

Example 1:

$$-3x + 4 = 16 - 8x$$

Q1:

Example 2:

$$2x - 7 = 8x - 9$$

Q2:

7.3b Simplify First

The first step of solving is to _____ each side _____.

We can simplify by _____ and _____.

Example 1:

$$3(2x-6)+8=17$$

Q1:

Example 2:

$$12x-5(3x-1)=4+3(2x+1)$$

Q2:

7.3c Fractions

Clear fractions by _____ by the _____.

Be sure to multiply _____ term on _____ sides.

Example 1:

$$\frac{3}{4}x-\frac{1}{2}=\frac{5}{6}$$

Q1:

Example 2:

$$\frac{3}{5}x-\frac{7}{10}=-4+\frac{7}{15}x$$

Q2:

7.3d Special Cases

Sometimes the variable _____!

This means there is either _____ or _____.

Example 1:

$$2x+5=2x-1$$

Example 2:

$$3x-9=3(x-3)$$

Example 3:

$$6x+2=3(2x+1)$$

Example 4:

$$4x+1=2(2x+3)-5$$

Q1

Q2

You have completed the videos for 7.3 Solve Linear Equations. On your own paper, complete the homework assignment.

7.4 Formulas

7.4a Two Step Formulas

Solving formulas: Treat other variables like _____.

Final answer is an _____.

Example: $3x = 15$ and $wx = y$

Example 1:

Solve $wx + b = y$ for x

Example 2:

Solve $ab + 5y = wx + y$ for b

Q1:

Q2:

7.4b Multi-Step Formulas

Strategy:

IMPORTANT: Terms _____ reduce.

Example 1:

Solve $a(3x+b)=by$ for x

Example 2:

Solve $3(a+2b)+5b=-2a+b$ for a

Q1:

Q2:

Clear fractions by _____.

Example 1:

Solve $\frac{5}{x}+4a=\frac{b}{x}$ for x

Q1:

Example 2:

Solve $A=\frac{1}{2}hb_1+\frac{1}{2}hb_2$ for b_1

Q2:

You have completed the videos for 7.4 Formulas. On your own paper, complete the homework assignment.

7.5 Word Problems

7.5a Using Formulas

Formulas usually have a set _____.

Example 1:

A financial manager has determined that the cost per unit for a calculator is $15 and that the fixed costs per month are $2000. Find the number of calculators produced during a month in which the total cost was $5000.

Q1:

Example 2:

The principal is $400, and the time is 2 years. Find the simple interest rate, when the interest is $120.

Q2:

Translate:

- Is/Were/Was/Will Be:
- More than:
- Subtracted from/Less than:

Example 1:

Five less than three times a number is nineteen. What is the number?

Example 2:

Seven more than twice a number is six less than three times the same number. What is the number?

Q1:

Q2:

7.5c Consecutive Integers

Consecutive Numbers:

First:

Second:

Third:

Example 1:

Find three consecutive numbers whose sum is 543.

Q1:

Example 2:

Find four consecutive integers whose sum is -222.

Q2:

You have completed the videos for 7.5 Word Problems. On your own paper, complete the homework assignment.

7.6 More Word Problems

7.6a Triangles

The angles of a triangle add to _____.

Example 1:

Two angles of a triangle are the same measure. The third angle is 30 degrees less than the first. Find the three angles.

Q1:

Example 2:

The second angle of a triangle measures twice the first. The third angle is 30 degrees more than the second. Find the three angles.

Q2:

7.6b Perimeter

Formula for perimeter of a rectangle:

Width is the _____ side.

Example 1:

A rectangle is three times as long as it is wide. If the perimeter is 112 cm, what is the length?

Q1:

Example 2:

The width of a rectangle is 6 cm less than the length. If the perimeter is 52 cm, what is the width?

Q2:

Table:

Equation is always for the _____.

Example 1:

Alexis is five years younger than Brian. In seven years, the sum of their ages will be 49 years. How old is each now?

Q1:

Example 2:

Maria is ten years older than Sonia. Eight years ago, Maria was three times Sonia's age. How old is each now?

Q2:

You have completed the videos for 7.6 More Word Problems. On your own paper, complete the homework assignment.

Congratulations! You made it through the material for Unit 7: Linear Equations and Applications. It is time to prepare for your exam. On a separate sheet of paper, complete the review/practice test. Once you have completed the review/practice test, ask your instructor to take the test. Good luck!

Unit 8:
Graphing Linear Equations and Solving Systems of Equations

To work through the unit, you should:

1. Watch a video, as you watch, fill out the workbook (top and example sections).
2. Complete Q1 and Q2 in WAMAP, put your work in the right column of the page.
3. Repeat #1 and #2 with each page until you reach the  .
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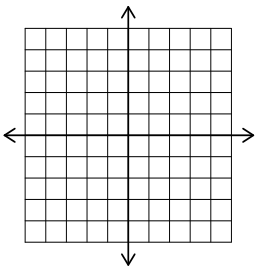
8.1 Slope

8.1a Graphing Points and Lines

The Coordinate Plane:

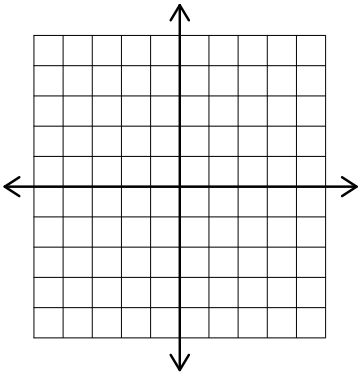


Give _____ to a point going _____ then _____ as _____.

If we have an equation, we can pick values for _____ and find values for _____.

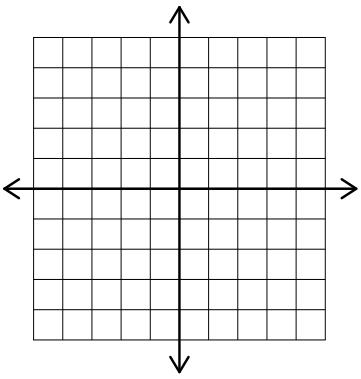
Example 1:

Graph the points
$(-2,3),(4,-1),(-2,-4),(0,3),(-1,0)$ and $(3,4)$

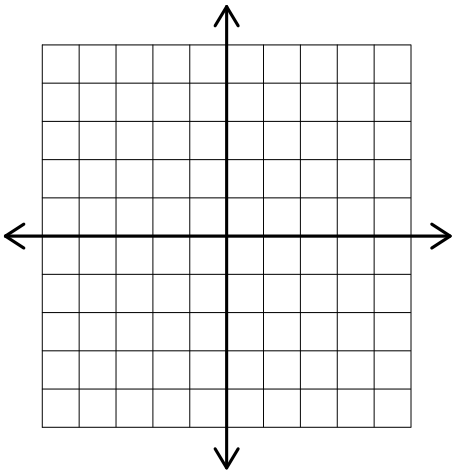


Example 2:

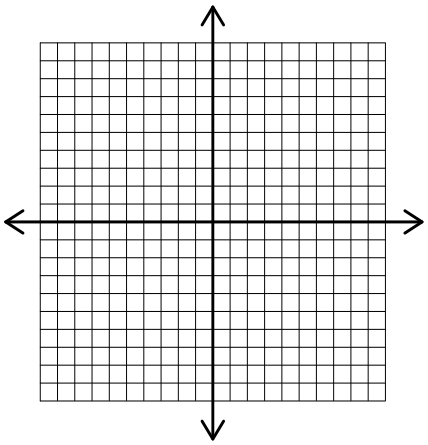
Graph the line $y = 2x - 1$



Q1:



Q2:



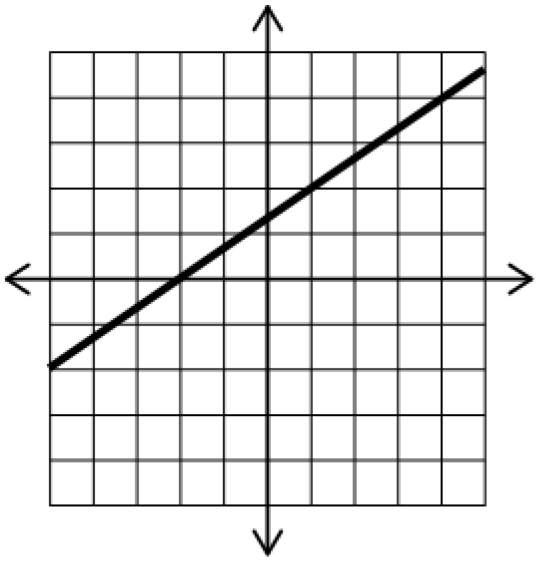
8.1b Slope from Graph

Slope:

Negative Slope:  Positive Slope:  Big Slope:  Small Slope: 

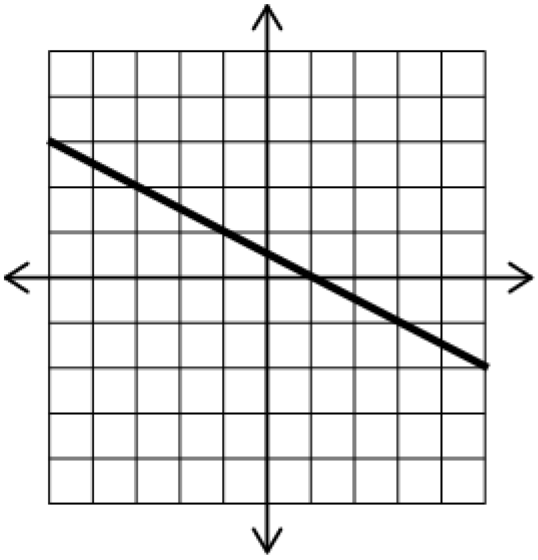
Example 1:

Find the Slope

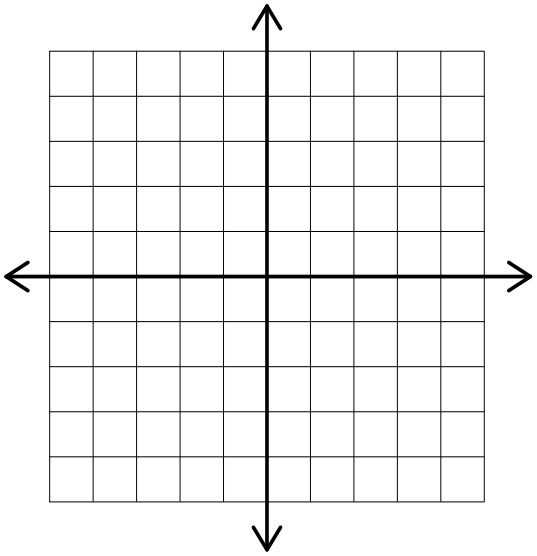


Example 2:

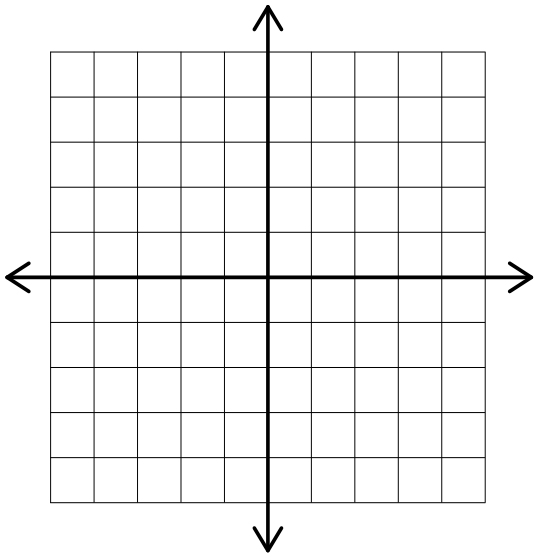
Find the Slope



Q1:



Q2:



8.1c Slope from Points

Slope Equation:

Example 1:

Find the slope between $(7,2)$ and $(11,4)$

Q1:

Example 2:

Find the slope between $(-2,-5)$ and $(-17,4)$

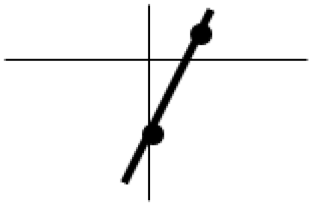
Q2:

You have completed the videos for 8.1 Slope. On your own paper, complete the homework assignment.

8.2 Equations of Lines

8.2a Slope-Intercept Equation

Slope Intercept Equation:



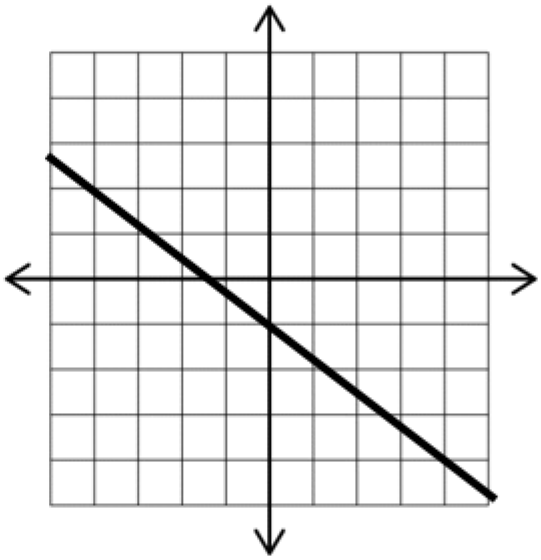
Example 1:

Give the equation of the line with

a slope of $-\frac{3}{4}$ and a y-intercept of 2

Example 2:

Give the equation of the graph:



Q1

Q2:

8.2b Equation Through a Point

To find the y-intercept we use _____ and solve for _____.

Example 1:

Give the equation of the line that passes through $(6,-2)$ and has a slope of 4.

Q1:

Example 2:

Give the equation of the line that passes through $(-3,5)$ and has a slope of $-\frac{2}{3}$.

Q2:

8.2c Put in Slope-Intercept Form

We may have to put the equation in _____.

To do this we _____.

Example 1:

Give the slope and y-intercept

$5x + 8y = 16$

Q1:

Example 2:

Give the slope and y-intercept

$-3x + 2y = 8$

Q2:

8.2d Graph a Linear Equation

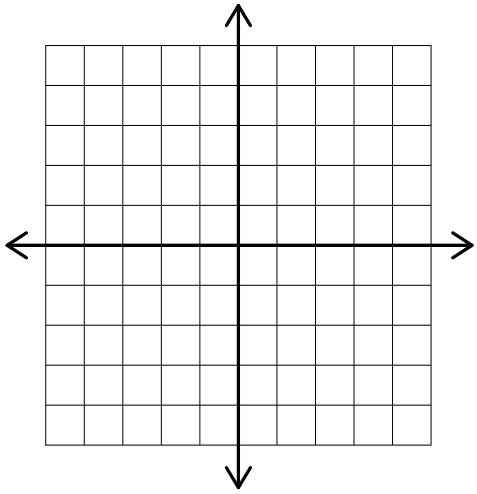
We can graph an equation by identifying the _____ and _____.

Start at the _____ and use the _____ for changing to the next point.

Remember slope is _____ over _____.

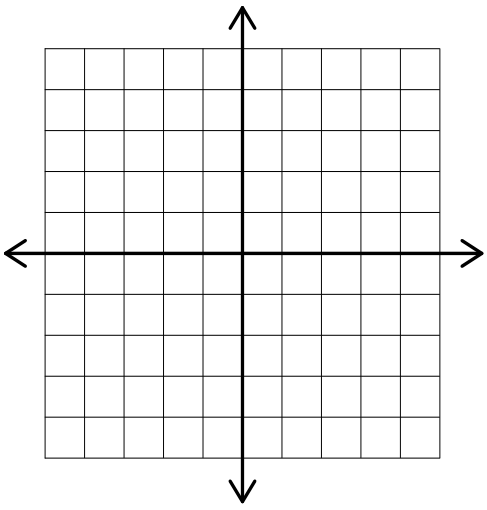
Example 1:

Graph $y = -\frac{3}{4}x + 2$

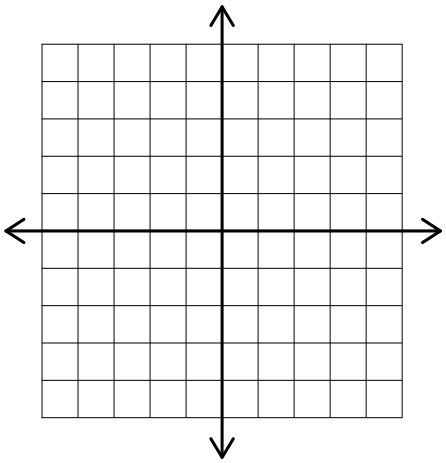


Example 2:

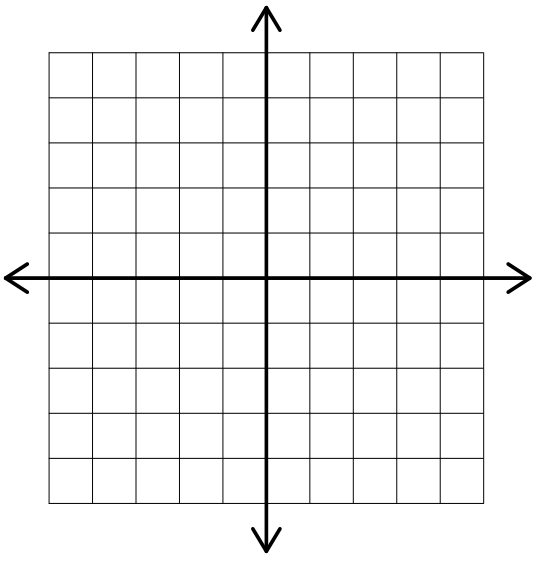
Graph $3x - 2y = 2$



Q1:



Q2:



8.2e Given Two Points

To find the equation of a line you must have the _____.

Recall the slope formula:

To find the y-intercept we use _____ and solve for _____.

Example 1:

Find the equation of the line through $(-3,-5)$ and $(2,5)$

Q1:

Example 2:

Find the equation of the line through $(1,-4)$ and $(3,5)$

Q2:

You have completed the videos for 8.2 Equations of Lines. On your own paper, complete the homework assignment.

8.3 Line of Best Fit

8.3a Scatter Plot

Scatterplot: _____ of _____

Recall: (x, y) where $x =$_____ $y =$_____

Example 1:

x	y
2	4
1	6
4	1
3	3

Q1:

Example 2:

Age	Height
5	38
8	45
11	51
14	55

Q2:

8.3b Centroid

The Centroid of a scatterplot uses _____ of _____and _____ of ___.

Notation for Centroid: _____

Average: _____

Example 1:

Age	Height
5	38
8	45
11	51
14	55

Q1:

Example 2:

x	*y*
3	7
11	2
4	6

Q2:

8.3c Estimate the Line

Line of Best Fit _____ the _____ of a _____.

Key point on the line of best fit is the _____.

For the slope we will _____ the trend of the data.

Example 1:

Estimate the line of best fit through the points and estimate its equation:

x	*y*
2	1
2	3
3	1
3	4
4	3
5	5

Q1:

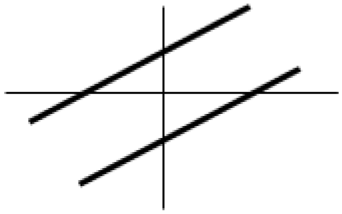
Q2:

You have completed the videos for 8.3 Line of Best Fit. On your own paper, complete the homework assignment.

8.4 Parallel and Perpendicular Lines

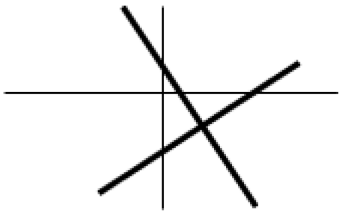
8.4a Slopes

Parallel Lines:



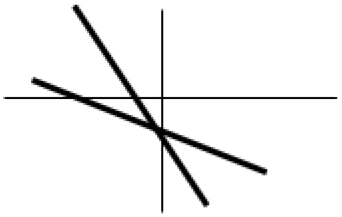
Slope:

Perpendicular Lines:



Slope:

Neither:



Example 1:

One line goes through $(5,2)$ and $(7,5)$. Another line goes through $(-2,-6)$ and $(0,-3)$. Are the lines parallel, perpendicular, or neither?

Example 2:

One line goes through $(-4,1)$ and $(-1,3)$. Another line goes through $(2,-1)$ and $(6,-7)$. Are the lines parallel, perpendicular, or neither?

Example 3:

One line goes through $(3,7)$ and $(-6,-8)$. Another line goes through $(5,2)$ and $(-5,-4)$. Are the lines parallel, perpendicular, or neither?

Q1:

Q2:

8.4b Parallel Equations

Parallel lines have the _____ slope.

Once we know the slope and a point, we can use the formula:

Example 1:

Find the equation of the line parallel to the line $y = -\frac{3}{4}x + 2$ that goes through the point $(-8,1)$

Q1:

Example 2:

Find the equation of the line parallel to the line $2x - 5y = 3$ that goes through the point $(5,3)$

Q2:

8.4c Perpendicular Equations

Perpendicular lines have _____ slopes.

Once we know the slope and a point, we can use the formula:

Example 1:

Find the equation of the line perpendicular to the line $y = 5x + 1$ that goes through the point $(-5, 2)$

Q1:

Example 2:

Find the equation of the line perpendicular to the line $3x + 2y = 5$ that goes through the point $(-3, -4)$

Q2:

You have completed the videos for 8.4 Parallel and Perpendicular Lines. On your own paper, complete the homework assignment.

8.5 Systems by Graphing

8.5a Solutions

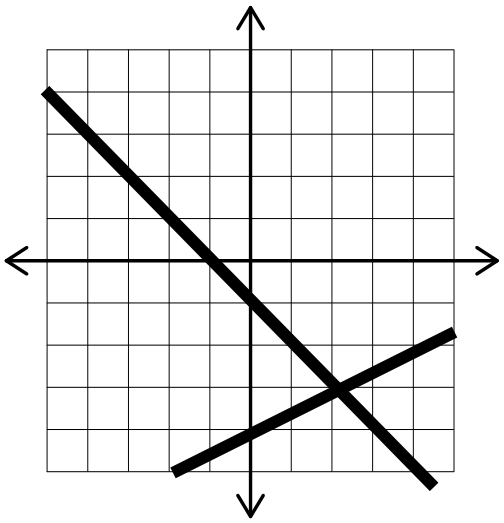
The points on a line are the _____ to the equation.

The intersection of two lines is the _____ to both equations!

Other options: _____ lines have _____ solutions. _____ lines have _____ solutions.

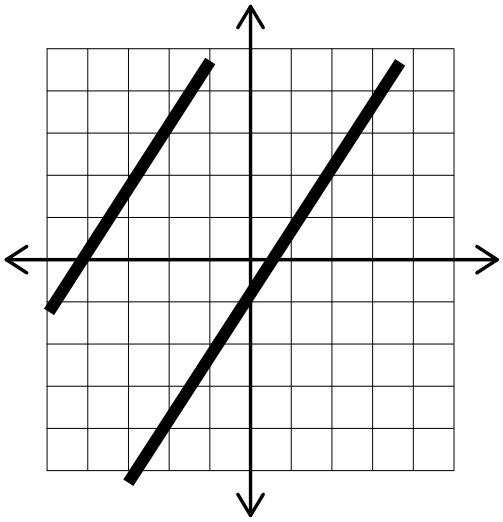
Example 1:

What is the solution for both lines?



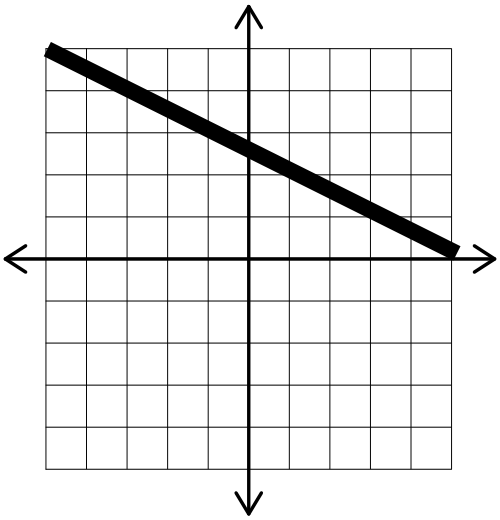
Example 2:

What is the solution for both lines?



Example 3:

What is the solution for both lines?



Q1:

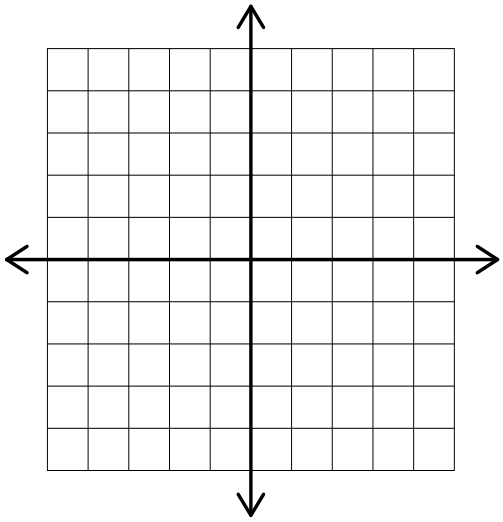
8.5b Solve with Intercept Form

To graph lines, remember the equation _____.

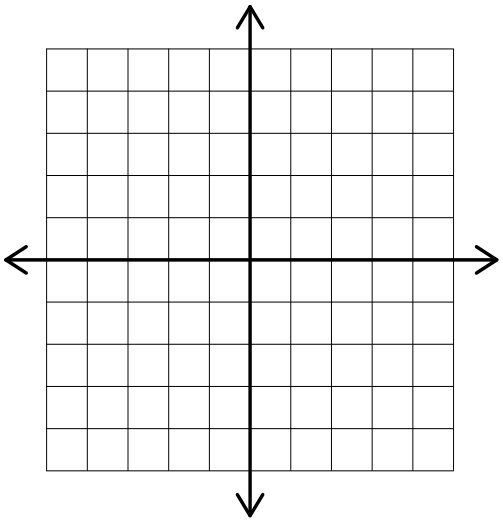
Start with the _____ or ___ and use the _____ or ____to find the next point.

Example 1:

$$y = -\frac{2}{3}x + 3$$
$$y = 2x - 5$$

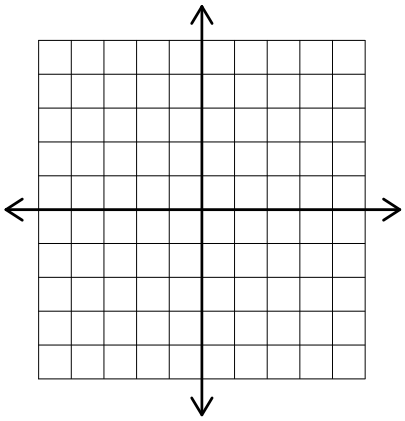


Q1:

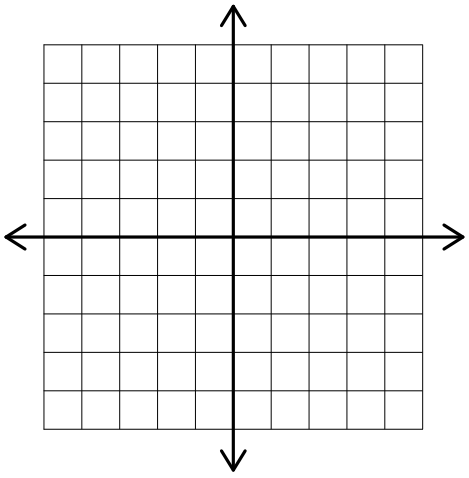


Example 2:

$$2x - y = -4$$
$$x + y = 1$$



Q2:



8.5c Break-even Point

The break-even point is where the curves for supply and demand _____.

Example 1:

Monthly demand for Greeny Babies is given by the equation $y = 8000 - 400x$, while monthly supply is given by $y = 400x$. At what price will supply equal demand?

Q1:

Example 2:

The demand of a product is modeled by $N = -20p + 1000$. The supply for the product by $N = 5p + 250$. At what price will supply equal demand?

Q2:

You have completed the videos for 8.5 Systems by Graphing. On your own paper, complete the homework assignment.

Congratulations! You made it through the material for Unit 8: Graphing Linear Equations and Solving Systems of Equations. It is time to prepare for your exam. On a separate sheet of paper, complete the review/practice test. Once you have completed the review/practice test, ask your instructor to take the test. Good luck!

Unit 9:
Polynomials

To work through the unit, you should:

1. Watch a video, as you watch, fill out the workbook (top and example sections).
2. Complete Q1 and Q2 in WAMAP, put your work in the right column of the page.
3. Repeat #1 and #2 with each page until you reach the  .
4. Complete the homework assignment on your own paper.
5. Repeat #1 thru #4 until you reach the end of the unit.
6. Complete the review/practice test on your own paper.
7. Take the unit exam.

9.1 Exponents

9.1a Product Rule

$a^3 \bullet a^2 =$

Product Rule: $a^m \bullet a^n =$

Example 1:

$$\left(2x^3\right)\left(4x^2\right)\left(-3x\right)$$

Q1:

Example 2:

$$\left(5a^3b^7\right)\left(2a^9b^2c^4\right)$$

Q2:

$\frac{a^5}{a^3} =$

Quotient Rule: $\frac{a^m}{a^n} =$

Example 1:

$$\frac{a^7b^2}{a^3b}$$

Example 2:

$$\frac{8m^7n^4}{-6m^5n}$$

Q1:

Q2:

$(ab)^3 =$

Power of a Product: $(ab)^m =$

$\left(\frac{a}{b}\right)^3 =$

Power of a Quotient: $\left(\frac{a}{b}\right)^m =$

$(a^2)^3 =$

Power of a Power: $(a^m)^n =$

Example 1:

$$(5a^4b)^3$$

Q1:

Example 2:

$$\left(\frac{-5m^3}{9n^4}\right)^2$$

Q2:

$\frac{a^3}{a^3} =$

Zero Power Rule: $a^0 =$

Example 1:

$$\left(5x^3yz^5\right)^0$$

Q1:

Example 2:

$$\left(3x^2y^0\right)\left(5x^0y^4\right)\left(x^2y^3\right)$$

Q2:

$\frac{a^3}{a^5} =$

Negative Exponent Rules: $a^{-m} =$ $\frac{1}{a^{-m}} =$ $\left(\frac{a}{b}\right)^{-m} =$

Example 1:

$$\frac{2}{5a^{-4}}$$

Example 2:

$$\frac{7x^{-5}}{3^{-1}yz^{-4}}$$

Q1:

Q2:

$a^m a^n =$

$\left(\frac{a}{b}\right)^m =$

$a^{-m} =$

$\frac{a^m}{a^n} =$

$\left(a^m\right)^n =$

$\frac{1}{a^{-m}} =$

$(ab)^m =$

$a^0 =$

$\left(\frac{a}{b}\right)^{-m} =$

To Simplify

Example 1:

$$\left(4x^{-5}y^2z\right)^2\left(2x^4y^{-2}z^3\right)^4$$

Q1:

Example 2:

$$\frac{\left(2x^2y^{-3}\right)^{-4}\left(x^4y^{-6}\right)^{-2}}{\left(x^{-6}y^4\right)^2}$$

Q2:

You have completed the videos for 9.1 Exponents. On your own paper, complete the homework assignment.

9.2 Scientific Notation

9.2a Convert Scientific and Standard Notation

$a \times 10^b$

a is

b is

b positive

b negative

Example 1:

Convert to Standard Notation

5.23×10^5

Example 2:

Convert to Standard Notation

4.25×10^{-4}

Example 3:

Convert to Scientific Notation

81,500,000

Example 4:

Convert to Scientific Notation

0.0000245

Q1:

Q2:

Q3:

Q4:

9.2b Almost Scientific Notation

Put the number in front in _____.

Then use _____ on the 10's.

Example 1:

523.6×10^{-8}

Q1:

Example 2:

0.0032×10^{5}

Q2:

9.2c Multiply or Divide

Multiply/Divide the _____.

Then use _____ on the 10's.

Example 1:

$$\left(3.4\times10^{5}\right)\left(2.7\times10^{-2}\right)$$

Example 2:

$$\frac{5.32\times10^{4}}{1.9\times10^{-3}}$$

Q1:

Q2:

9.2d Multiply or Divide where Answer is not in Scientific Notation

If our final answer is not in scientific notation we must _____.

Example 1:

$$\left(6.7\times10^{-6}\right)\left(5.2\times10^{-3}\right)$$

Example 2:

$$\frac{2.352\times10^{-6}}{8.4\times10^{-2}}$$

Q1:

Q2:

9.2e Multiply and Divide

Multiply/Divide the _____.

Then use _____ on the 10's.

Example 1:

$$\frac{\left(4.2\times10^{4}\right)\left(8.1\times10^{-6}\right)}{1.4\times10^{5}}$$

Q1:

Example 2:

$$\frac{2.01\times10^{-5}}{\left(1.5\times10^{-3}\right)\left(3.2\times10^{-4}\right)}$$

Q2:

You have completed the videos for 9.2 Scientific Notation. On your own paper, complete the homework assignment.

9.3 Advanced Scientific Notation

9.3a Using the Calculator

To enter scientific notation on your calculator, use the _____ button. Write your answer in scientific notation.

Example 1:

The population of India is about 1.338×10^9 people. The population of China is about 1.418×10^9 people. How many more people live in China?

Example 2:

The mass of an electron is 9.109×10^{-31} kg. The mass of a proton is 1.6726×10^{-27} kg. How many times more massive is the proton than the electron?

Q1:

Q2:

9.3b Entering Exponents

To apply an exponent to a number written in scientific notation first surround the number with_____, then use the _____ key to enter your exponent. Write your answer in scientific notation.

Example 1:

Evaluate:

$$\left(3.726\times10^{-12}\right)^{3}$$

Q1:

Example 2:

A center pivot irrigation system waters a circle of land. The radius of the circle is 1.32×10^{3} ft. What is the area that is irrigated?

Q2:

9.3c Order of Operations

Remember to apply order of operations when evaluating expressions. Use _____around the entire _____and _____when evaluating fractions containing multiple operations. Write your answer in scientific notation.

Example 1:

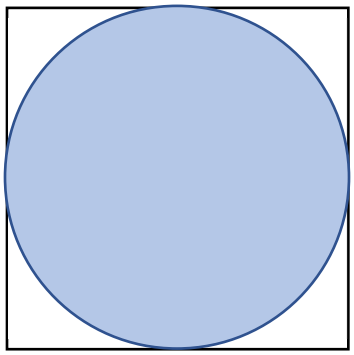
Simplify:

$$\frac{3.94\times10^{12}-\left(1.08\times10^{5}\right)^{2}}{\left(5.86\times10^{-10}\right)\left(3.976\times10^{3}\right)}$$

Q1:

Example 2:

A farmer has a square plot of land that is 8.6×10^{2} m on each side. A center pivot irrigation system waters a circle of radius 4.3×10^{2} m centered in the middle of the square. How much of the land is not irrigated?



Q2:

You have completed the videos for 9.3 Advanced Scientific Notation. On your own paper, complete the homework assignment.

9.4 Add, Subtract, Multiply Polynomials

9.4a Evaluate

Term:

Monomial:

Binomial:

Trinomial:

Polynomial:

Evaluate:

Example 1:

$5x^2 - 2x + 6$ when $x = -2$

Q1:

Example 2:

$-x^2 + 2x - 7$ when $x = 4$

Q2:

9.4b Add

To add polynomials:

To subtract polynomials:

Example 1:

$$\left(5x^2-7x+9\right)+\left(2x^2+5x-14\right)$$

Q1:

Example 2:

$$\left(3x^3-4x+7\right)-\left(8x^3+9x-2\right)$$

Q2:

9.4c Multiply Monomial by Polynomial

To multiply a monomial by a polynomial:

Example 1:

$$5x^2\left(6x^2-2x+5\right)$$

Example 2:

$$-3x^4\left(6x^3+2x-7\right)$$

Q1:

Q2:

9.4d Multiply Binomials

To multiply a binomial by a binomial:

This is often called _____ which stands for _____.

Example 1:

$$(4x-2)(5x+1)$$

Q1:

Example 2:

$$(3x-7)(2x-8)$$

Q2:

9.4e Multiply Trinomials

Multiplying trinomials is just like _____ we just have _____.

Example 1:

$$(3x-4)(9x^2+12x+16)$$

Q1:

Example 2:

$$(2x^2-6x+1)(4x^2-2x-6)$$

Q2:

9.4f Multiply Monomials and Binomials

Multiply _____ first, then _____ the _____.

Example 1:

$$4(2x-4)(3x+1)$$

Example 2:

$$3x(x-6)(2x+5)$$

Q1:

Q2:

$(a+b)(a-b)=$

Sum and Difference Shortcut

Example 1:

$$(x+5)(x-5)$$

Example 2:

$$(5x-2)(5x+2)$$

Q1:

Q2:

$(a+b)^2 =$

Notice that $(a+b)^2$ is _____ a^2+b^2. That is to say, $(a+b)^2 \neq a^2+b^2$

Perfect Square Shortcut:

Example 1:

$$(x-4)^2$$

Q1:

Example 2:

$$(2x+7)^2$$

Q2:

You have completed the videos for 9.4 Add, Subtract, Multiply Polynomials. On your own paper, complete the homework assignment.

9.5 Polynomial Long Division

9.5a Division by Monomials

To divide a polynomial by a monomial we _____ each _____ by the _____.

Example 1:

$$\frac{3x^5+18x^4-9x^3}{3x^2}$$

Example 2:

$$\frac{15a^6-25a^5+5a^4}{5a^4}$$

Q1:

Q2:

9.5b Review Long Division

Long Division Review:

$5\overline{)2632}$

Example 1:

$$\frac{5737}{6}$$

Q1:

Follow the same pattern as _____.

On the division step focus only on the _____.

Example 1:

$$\frac{x^3 - 2x^2 - 15x + 30}{x + 4}$$

Q1:

Example 2:

$$\frac{4x^3 - 6x^2 + 12x - 5}{2x - 1}$$

Q2:

9.5d Division with Missing Term

The exponents MUST _____.

If one is missing, we will add _____.

Example 1:

$$\frac{3x^3 - 50x + 4}{x - 4}$$

Example 2:

$$\frac{2x^3 + 4x^2 + 9}{x + 3}$$

Q1:

Q2:

You have completed the videos for 9.5 Polynomial Long Division. On your own paper, complete the homework assignment.

Congratulations! You made it through the material for Unit 9: Polynomials. It is time to prepare for your exam. On a separate sheet of paper, complete the review/practice test. Once you have completed the review/practice test, ask your instructor to take the test. Good luck!

Unit 10:
Factoring

To work through the unit, you should:

1. Watch a video, as you watch, fill out the workbook (top and example sections).
2. Complete Q1 and Q2 in WAMAP, put your work in the right column of the page.
3. Repeat #1 and #2 with each page until you reach the  .
4. Complete the homework assignment on your own paper.
5. Repeat #1 thru #4 until you reach the end of the unit.
6. Complete the review/practice test on your own paper.
7. Take the unit exam.

10.1 Factor Common Factors and Grouping

10.1a Find a GCF

Greatest Common Factor:_____ factor that _____ into each term

On variables we use the _____ exponent

Example 1:

Find the common factor:

$$15a^4 + 10a^2$$

Q1:

Example 2:

Find the common factor

$$4a^4b^7 - 12a^2b^6 + 20ab^9$$

Q2:

10.1b Factor a GCF

Factor:

$a(b+c)=$

Put the _____ in front and divide each _____. What is left goes into the _____.

Example 1:

$$9x^4-12x^3+6x^2$$

Q1:

Example 2:

$$21a^4b^5-14a^3b^7+7a^2b^4$$

Q2:

The GCF can be a _____.

Example 1:

$$5x(2y-7)+6y(2y-7)$$

Q1:

Example 2:

$$3x(2x+1)-7(2x+1)$$

Q2:

10.1d Grouping

Grouping: GCF of the _____ and _____

Then factor out the _____ (if it matches)

Example 1:

$$15xy + 10y - 18x - 12$$

Q1:

Example 2:

$$6x^2 + 3xy + 2x + y$$

Q2:

If the binomials don't match:

Example 1:

$$12a^2 - 7b + 3ab - 28a$$

Q1:

Example 2:

$$6xy - 20 + 8x - 15y$$

Q2:

You have completed the videos for 10.1 Factor Common Factors and Grouping. On your own paper, complete the homework assignment.

10.2 Factor Trinomials

10.2a Reverse FOIL

Recall FOIL: $(a+b)(c+d)=$

_____ multiplies to _____ and _____ multiplies to _____

The _____ and _____ must add to the _____

This may take some _____

Example 1:

$$3x^2+11x+10$$

Q1:

Example 2:

$$12x^2+16x-3$$

Q2:

Be aware of _____ variables when using reverse _____

Example 1:

$$12x^2 - 5xy - 2y^2$$

Q1:

Example 2:

$$6x^2 - 17xy + 10y^2$$

Q2:

Always factor the _____ first!

Example 1:

$$18x^4 - 21x^3 - 15x^2$$

Q1:

Example 2:

$$16x^3 + 28x^2y - 30xy^2$$

Q2:

10.2d Without a Leading Coefficient

If the leading coefficient (in front of x^2) is a 1, then the two numbers will _____ to the _____

Note: This only works if the leading coefficient is _____

Example 1:

$$x^2 - 2x - 8$$

Q1:

Example 2:

$$x^2 + 7xy - 8y^2$$

Q2:

10.2e Introduction to Radicals

A radical sign looks like this:_____ where a square root has an understood index

of _____ and all other roots _____ of the radical sign.

Radicals _____

$\sqrt[3]{4^3} =$ $\sqrt{25} =$ $\sqrt{6} =$

Simplify radicals, by break down the numbers using _____

Eliminate _____ where possible, meaning if the exponent is greater than or equal to the index.

Multiply numbers _____ back together if there is no more simplification possible.

Example 1:

Simplify the radical: $\sqrt{343}$

Example 2:

Simplify the radical: $\sqrt[3]{144}$

Q1:

Q2:

The exponent becomes the _____ in the fractional exponent.

The index becomes the _____ in the fractional exponent.

Remember to _____ fractional exponents whenever possible.

Example 1:

Simplify using fractional exponents:

$\sqrt[4]{x^{12}}$

Q1:

Example 2:

Write as a radical:

$5^{\frac{5}{8}}$

Q2:

Example 3:

Simplify using fractional exponents:

$\sqrt[3]{64}$

Q3:

You have completed the videos for 10.2 Factor Trinomials. On your own paper, complete the homework assignment.

10.3 Factoring Tricks

10.3a Perfect Squares

$(a+b)^2 =$

If we can take the square root of the first and last term it _____ be a _____

Example 1:

$$x^2 - 10x + 25$$

Q1:

Example 2:

$$9x^2 + 30xy + 25y^2$$

Q2:

$(a+b)(a-b)=$

Difference of Squares:

Example 1:

$$a^2-81$$

Q1:

Example 2:

$$49x^2-25y^2$$

Q2:

10.3c Sum of Squares

Factor: $a^2 + b^2$

Sum of squares is always _____ (this means it _____ be factored)

Example 1:

$$x^2 + 9$$

Q1:

Example 2:

$$32a^2b + 50b^3$$

Q2:

10.3d Sum and Difference of Cubes

Sum of Cubes: $a^3 + b^3 =$

Difference of Cubes: $a^3 - b^3 =$

Some cubes worth memorizing:

Example 1:

$$m^3 + 125$$

Q1:

Example 2:

$$8a^3 - 27y^3$$

Q2:

10.3e Difference of 4th Powers

The square root of x^4 is _____

With fourth powers we can use _____ twice!

Example 1:

$$a^4 - 16$$

Q1:

Example 2:

$$81x^4 - 256$$

Q2:

10.3f Difference of 6th Powers

The square root of x^6 is ____ and the cubed root of x^6 is _____

A difference of 6th powers may be a difference of _____ or a difference of _____

Use the _____ to decide which formula to use.

Example 1:

$$x^6 - 49y^6$$

Q1:

Example 2:

$$8a^6 - 27b^6$$

Q2:

Always factor the _____ first!

Example 1:

$$9x^3 - 81x$$

Q1:

Example 2:

$$2x^2y - 12xy + 18y$$

Q2:

You have completed the videos for 10.3 Factoring Tricks. On your own paper, complete the homework assignment.

10.4 Factoring Strategy

Always factor the _____ first!

2 terms | 3 terms | 4 terms

Example 1:

Which method would you use?

$25x^2 - 16$

Example 2:

Which method would you use?

$x^2 - x - 20$

Example 3:

Which method would you use?

$xy + 2y + 5x + 10$

Q1:

Q2:

Q3:

Q4:

Q5:

You have completed the videos for 10.4 Factoring Strategy. On your own paper, complete the homework assignment.

10.5 Solving Equations by Factoring

10.5a Zero Product Rule

Zero Product Rule: if $ab = 0$ then _____

To solve we set each _____ equal to _____

Example 1

$$(5x-1)(2x+5)=0$$

Q1:

Example 2:

$$2x(x-6)(2x+3)=0$$

Q2:

10.5b Solve by Factoring

If there is an x^2 and an x in the equation, we need to _____ before we _____

Example 1:

$$x^2 - 4x - 12 = 0$$

Q1:

Example 2:

$$3x^2 + x - 4 = 0$$

Q2:

10.5c Must Equal Zero

Before we factor, the equation must equal _____

To make factoring easier, we want the _____ term to be _____

Example 1:

$$5x^2 = 2x + 16$$

Q1:

Example 2:

$$-2x^2 = x - 3$$

Q2:

10.5d Simplify First

Before we make the equation equal zero, we may have to _____ first!

Example 1:

$$2x(x+4)=3x-3$$

Q1:

Example 2:

$$(2x-3)(3x+1)=-8x-1$$

Q2:

10.5e GCFs as Factors

When solving do not forget that the _____ is a _____ also.

If there is no _____ in the GCF then we can _____ it.

Example 1:

$$4x^3 - 12x^2 = 40x$$

Q1:

Example 2:

$$6x^2 = 36 - 15x$$

Q2:

10.5f Factoring the Variable

Distributive property in reverse (Factor): $ab + ac =$

Put all terms with the variable on one _____ and the other terms on the _____

Factor out the _____ and then _____ to isolate

Example 1:

Solve $\frac{ax+b}{c} = x + d$, for x

Q1:

Example 2:

Solve $A = \pi r^2 + \pi rl$ for π

Q2:

You have completed the videos for 10.5 Solving Equations by Factoring. On your own paper, complete the homework assignment.

10.6 Quadratic Formula

10.6a Using the Formula

If $ax^2 + bx + c = 0$ the $x =$

Example 1:

$$6x^2 + 7x - 3 = 0$$

Q1:

Example 2:

$$-5x^2 - x + 2 = 0$$

Q2:

10.6b Make Equation Equal Zero

Before using the quadratic formula, the equation must equal _____ and be in _____

That is the equation should look like:

Example 1:

$$2x^2 = 15 - 7x$$

Q1:

Example 2:

$$3x^2 + 5x + 2 = 7$$

Q2:

10.6c Missing Terms

If a term is missing, we use _____ in the quadratic formula, factoring or the square root of both sides.

Example 1:

$$5x^2 = 2x$$

Example 2:

$$3x^2 - 51 = 0$$

Example3:

$$5x^2 = 23$$

Example 4:

$$-2x^2 + 31 = 0$$

Q1:

Q2:

You have completed the videos for 10.6 Quadratic Formula. On your own paper, complete the homework assignment.

Congratulations! You made it through the material for Unit 10: Factoring. It is time to prepare for your exam. On a separate sheet of paper, complete the practice test. Once you have completed the practice test, ask your instructor to take the test. Good luck!

Unit 11:
Rational Expressions

To work through the unit, you should:

1. Watch a video, as you watch, fill out the workbook (top and example sections).
2. Complete Q1 and Q2 in WAMAP, put your work in the right column of the page.
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4. Complete the homework assignment on your own paper.
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6. Complete the review/practice test on your own paper.
7. Take the unit exam.

11.1 Evaluate Functions

11.1a Evaluate Functions – Functions

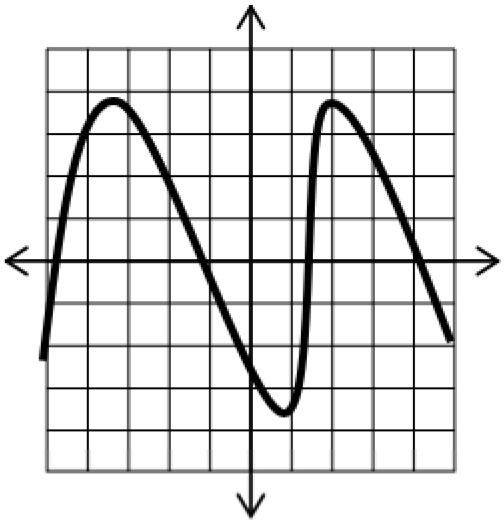
Function:

If it is a function, we often write ____ which is read _____

A graph is a function if it passes the _____, or each _____ has at most one ____

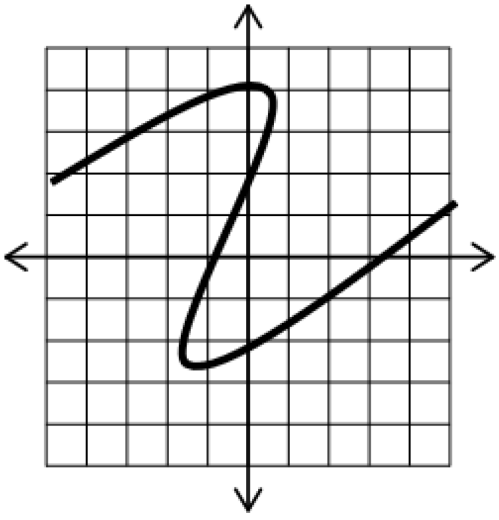
Example 1:

Is the graph a function?

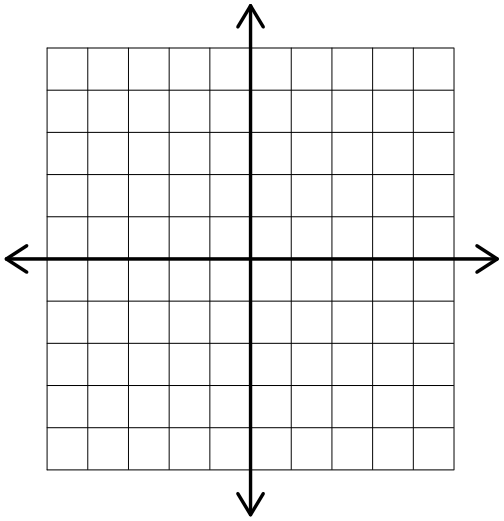


Example 2:

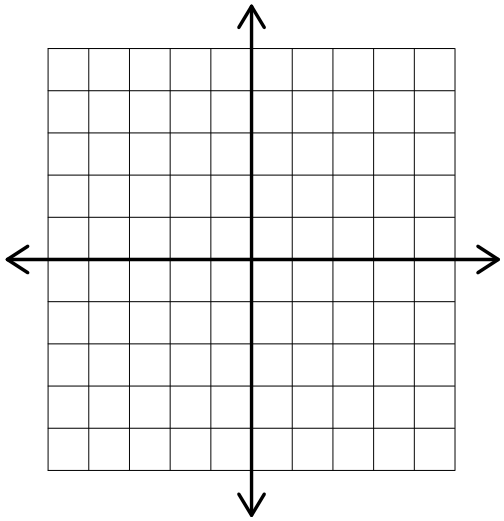
Is the graph a function?



Q1:



Q2:



11.1b Function Notation

Function notation:

What is inside of the function _____ the _____

Example 1:

$$f(x) = -x^2 + 2x - 5$$

Find $f(3)$

Q1:

Example 2:

$$g(x) = \sqrt{2x + 5)}$$

Find $g(20)$

Q2:

11.1c Evaluate Function at an Expression

When replacing a variable, we always use _____

What is inside of the function _____ the _____

Example 1:

$$f(x)=\sqrt{2x}+3x$$

Find $f\left(8x^2\right)$

Q1:

Example 2:

$$p(n)=n^2-2n+5$$

Find $p(n-3)$

Q2:

11.1d Domain

Domain:

Fractions:

Even Radicals:

Whenever you divide an inequality by a negative you must_____

Example 1:

Find the domain:

$$f(x)=3\sqrt[4]{-3x-9}+4$$

Q1:

Example 2:

Find the domain:

$$g(x)=3\left|2x+7\right|^{2}-4$$

Q2:

Example 3:

Find the domain:

$$h(x)=\frac{x-1}{x^{2}-x-2}$$

Q3:

You have completed the videos for 11.1 Evaluate Functions. On your own paper, complete the homework assignment.

11.2 Exponential Equations

11.2a With Common Base

Exponential functions:

Solving exponential functions: If the _____ are equal then the _____ are equal.

Example 1:

$$7^{3x-6} = 7^{5x+2}$$

Q1:

Example 2:

$$4^{5-x} = 4^{3x}$$

Q2:

11.2b Find a Common Base

If we don't have a common base, then we find the _____ of the base

Recall exponent property: $\left(a^m\right)^n =$

When using the above property, we may have to _____

Example 1:

$$27^{2x} = 9$$

Q1:

Example 2:

$$8^{2x-4} = 16^{x+3}$$

Q2:

11.2c With Negative Exponents

Fractions are created by _____

Example 1:

$$\left(\frac{1}{3}\right)^{x} = 81^{4x}$$

Q1:

Example 2:

$$\left(\frac{1}{25}\right)^{3x-1} = 125^{4x+2}$$

Q2:

You have completed the videos for 11.2 Exponential Equations. On your own paper, complete the homework assignment.

11.3 Logarithms

11.3a Convert Between Logs and Exponents

Logarithm:

$b^x = a$ can be written as _____

Example 1:

Write as a log:

$m^2 = 25$

Q1:

Example 2:

Write as an exponent:

$\log_x 64 = 2$

Q2:

11.3b Evaluate Logs

To evaluate a log: make the equation _____ and convert to an _____

Example 1:

$\log_4 64$

Q1:

Example 2:

$\log_3\left(\frac{1}{81}\right)$

Q2:

11.3c Solve Log Equations

To solve a log equation: convert to an _____

Example 1:

$$\log_x 8 = 3$$

Q1:

Example 2:

$$\log_5 (2x - 6) = 2$$

Q2:

11.3d pH

In chemistry, pH is a measure of _____

pH =_____

Example 1:

Lemons have a pH of 2. Find the concentration of $\left[H^+\right]$

Q1:

Example 2:

Soda has a hydrogen concentration of 3.16×10^{-3} moles/L. What is the pH?

Q2:

You have completed the videos for 11.3 Logarithms. On your own paper, complete the homework assignment.

11.4 Graphs of Exponential and Logarithmic Functions

11.4a Exponential Functions

To graph an exponential function, you can _____ to find _____ on the graph.

Example 1:

Graph $y = 2^x$

x	y
-2	
-1	
0	
1	
2	

Q1:

Example 2:

Graph $y = 5^x$

x	y
-2	
-1	
0	
1	
2	

Q2:

11.4b More Graphs of Exponential Functions

When evaluating exponential functions remember to use the _____.

Example 1:

Graph $y = 10(2^x)$

x	y
-1	
0	
1	
2	

Q1:

Example 2:

Graph $y = \left(\frac{1}{2}\right)^x$

x	y
-1	
0	
1	
2	

Q2:

11.4c Exponential Growth and Decay

In exponential growth the y values _____ when x increases.

In exponential decay the y values _____ when x increases.

Example 1:

Fill in the table. Select which form is the graph (growth/decay) sketch graph on paper.

$y = e^x$

x	y
-5	
0	
5	
10	
15	

Q1:

Example 2:

Fill in the table. Select which form is the graph (growth/decay) sketch graph on paper.

$y = 15e^{0.05x}$

x	y
-5	
0	
5	

Q2:

11.4d Logarithmic Function Graphs

The argument of a logarithm must be _____. Logarithm functions have a _____.

Example 1:

Fill in table, plot points and sketch on paper.

$y = \log(x)$

x	y
10	
2	
1	
0.5	
0.25	
0	
-1	

Example 2:

Fill in table, plot points and sketch on paper.

$y = \ln(x) = \log_e x$

x	y
10	
2	
1	
0.5	
0.25	
0	
-1	

Q1:

Q2:

You have completed the videos for 11.4 Graphs of Exponential and Logarithmic Functions. On your own paper, complete the homework assignment.

11.5 Interest

11.5a N Compound a Year

Compound interest:

n compounds per year: $A = P\left(1 + \frac{r}{n}\right)^{nt}$

$A =$

$P =$

$r =$

$n =$

$t =$

Example 1:

Suppose you invest $13,000 in an account that pays 8% interest compounded monthly. How much would be in the account after 9 years?

Q1:

Example 2:

A bank loans out $800 at 3% interest compounded quarterly. If the loan is paid in full after five years, what is the balance owed

Q2:

11.5b Continuous Interest

Continuous interest:

$A = Pe^{rt}$

$A =$

$P =$

$e =$

$r =$

$t =$

Example 1:

An investment of $25,000 is at an interest rate of 11.5% compounded continuously. What is the balance after 20 years?

Q1:

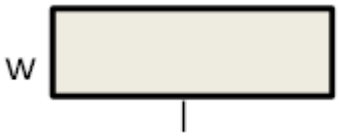
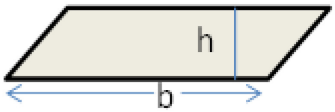
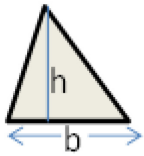
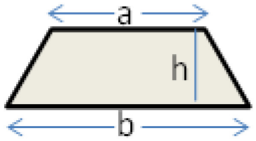
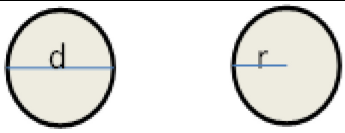
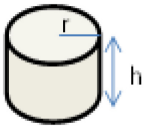
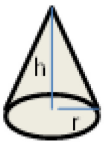
Example 2:

What is the balance at the end of 10 years on an investment of $13,000 at 4% compounded continuously?

Q2:

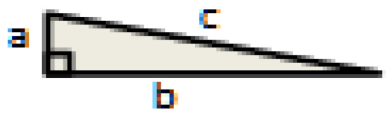
You have completed the videos for 11.5 Interest. On your own paper, complete the homework assignment.

Geometric Formulas

Name	Diagram	Area
Rectangle		$A = lw$ $P = 2l + 2w$
Parallelogram		$A = bh$
Triangle		$A = \frac{1}{2}bh$
Trapezoid		$A = \frac{1}{2}h(a+b)$
Circle		$A = \pi r^2$ $C = \pi d = 2\pi r$
Name	**Diagram**	**Volume**
Rectangular Solid		$V = lwh$
Right Circular Cylinder		$V = \pi r^2 h$
Right Circular Cone		$V = \frac{1}{3}\pi r^2 h$
Sphere		$V = \frac{4}{3}\pi r^3$

Right Triangle

Pythagorean Theorem: $a^2 + b^2 = c^2$



Conversion Factors

LENGTH

English	**Metric (meter)**
12 in = 1 ft	1000 mm = 1 m
3 ft = 1 yd	100 cm = 1 m
1 mi = 5280 ft	10 dm = 1 m
	1 dam = 10 m
	1 hm = 100 m
	1 km = 1000 m

English to Metric

1 in = 2.54 cm

TEMPERATURE

$$C = \frac{5(F-32)}{9}$$

$$F = \frac{9}{5}C + 32$$

VOLUME

English	**Metric (liter)**
8 fl oz = 1 cup (c)	1000 mL = 1 L
2 cups (c) = 1 pint (pt)	100 cL = 1 L
2 pints (pt) = 1 quart (qt)	10 dL = 1 L
4 quarts (qt) = 1 gallon (gal)	1 daL = 10 L
	1 hL = 100 L
	1 kL = 1000 L
	1 mL = 1 cc = 1 cm^3

English to Metric

1 gallon (gal) = 3.79 liter (L)

1in^3 = 16.39 mL

TIME

60 seconds (sec) = 1 minute (min)
60 minutes (min) = 1 hour (hr)
24 hours (hr) = 1 day
52 weeks = 1 year
365 days = 1 year

WEIGHT (MASS)

English	**Metric (gram)**
16 oz = 1 pound (lb)	1000 mg = 1 g
2,000 lb = 1 Ton (T)	100 cg = 1 g
	10 dg = 1 g
	1 dag = 10 g
	1 hg = 100 g
	1 kg = 1000 g

English to Metric

2.20 lb = 1 kg

INTEREST

Simple: I = Prt

Continuous: $A = Pe^{rt}$

Compound: $A = P\left(1+\frac{r}{n}\right)^{nt}$

Annual: $n = 1$

Semiannual: $n = 2$

Quarterly: $n = 4$

11.6 Dimensional Analysis

11.6a U.S. Customary

Dimensional analysis is the use of _____, which are always equal to _____.

Example 1:

Convert 2.1 miles to yards

Q1:

Example 2:

Convert 61.6 furlongs to miles.
(1 furlong = 220 yards)

Q2:

11.6b Metric

Metric conversions all consist of moving _____.

Example 1:

Convert 3171 milliliters to liters.

Q1:

Example 2:

Convert 12 hectometers to centimeters.
(1 hectometer = 100 meters**)**

Q2:

11.6c Metric ↔ U.S. Customary

For length, the only exact conversion is that _____

Example 1:

Your car has a gas tank that can contain 16 gallons. How many liters can it contain?

Q1:

Example 2:

You decide to run a 5K, which is 5 kilometers. How many miles did you run?

Q2:

11.6d Higher Powers

We apply the _____ to both sides of _____.

Example 1:

A basketball has a volume of 455.9 cubic inches. Convert this to cubic centimeters

Q1:

Example 2:

Moses Lake has a land area of 18.75 square miles. Convert this to square feet.

Q2:

11.6e Area/Volume Units

Some units of _____ and _____ have no length equivalents.

A _____ is the same as a _____.

Example 1:

A dosage for a certain liquid medicine is 15 cc.
Convert this to fluid ounces.

Q1:

Example 2:

The average American farm has 434 acres of land.
Convert this to hectares.
(1 ha = 10,000 m^2)
(1 ac = 43,560 ft^2)

Q2:

You have completed the videos for 11.6 Dimensional Analysis. On your own paper, complete the homework assignment.

11.7 Applied Dimensional Analysis

11.7a Dual Unit Conversions

Dual Unit:

"Per" is the _____

With dual units we convert _____

Example 1:

Convert 100 ft per sec to mi per hr

Q1:

Example 2:

Convert 8 miles per hr^2 to ft per sec^2

Q2:

11.7b Rates

To convert rates, we handle the units of the _____ and _____ separately.

Example 1:

A normal amount of blood sugar in glucose is 108 milligrams per deciliter. Find the equivalent in millimoles per liter. Glucose has a molar mass of 180.156 grams per mole.

Q1:

Example 2:

Oceanographers commonly measure flow of ocean currents in Sverdrups, which is equal to 1 million cubic meters per second. Globally, the flow of fresh water from rivers into the ocean is about 1.2 Sverdrups. Find this in cubic miles per day.

Q2:

11.7c Chemistry Applications

With more complicated dimensional analysis problems, we start with a _____ and use _____ to find its _____ or _____.

Example 1:

How many molecules are in 1 deciliter of water?

Q1:

Example 2:

Convert 451.4g Pb to grams of PbO

Use the following conversions:
207.2g Pb = 1 mol Pb
2 mol Pb = 3 mol PbO
1 mol PbO = 232.g PbO

Q2:

11.7d Physics Applications

With more complicated dimensional analysis problems, we start with a _____ and use _____ to find its _____ or _____.

Example 1:

The acceleration of an object moving through space was measured at 91 feet/min^2. What is this in meters/sec^2?

Q1:

Example 2:

A car's "footprint" is a square about 5.89 inches on one side. Estimate the average pressure beneath one tire, due to the weight of the car.

Car weight = 5.47 tons

Q2:

You have completed the videos for 11.7 Applied Dimensional Analysis. On your own paper, complete the homework assignment.

Congratulations! You made it through the material for Unit 11 Rational Expressions. It is time to prepare for your exam. On a separate sheet of paper, complete the practice test. Once you have completed the practice test, ask your instructor to take the test. Good luck!

Unit 12:
Proficiency Exam #2

To work through this unit, you should:

1. Complete the review/practice tests on your own paper. (There is a part A and part B.)
2. Take the (two-part) unit exam.