

## MATH 0300 - BEGINNING ALGEBRA

### Chapter 1 – Review of Real Numbers

#### 1.1 Math & Testing Success

"Be Mathematicious" ... <http://www.youtube.com/watch?v=6cAs1YBELmA&feature=related>

"Feel Your Best" ... <http://www.youtube.com/watch?v=Zs-IeO31kZk&feature=related>

"Testing Strategies" ... <http://www.youtube.com/watch?v=fvS-h1ty8yo&feature=related>

#### 1.2 Symbols and Sets of Numbers

1) [http://www.youtube.com/watch?v=IK0OR2vg\\_Oc&feature=related](http://www.youtube.com/watch?v=IK0OR2vg_Oc&feature=related)

2) [http://www.youtube.com/watch?v=IK0OR2vg\\_Oc&feature=related](http://www.youtube.com/watch?v=IK0OR2vg_Oc&feature=related)

3) <http://www.youtube.com/watch?v=kOLfvdEv0yM&feature=related>

4) [http://www.youtube.com/watch?v=Ncj1Xoh\\_-mo&feature=related](http://www.youtube.com/watch?v=Ncj1Xoh_-mo&feature=related)

5) <http://www.youtube.com/watch?v=mo2fX9otVgc&feature=related>

#### 1.3 Fractions

1) [http://www.youtube.com/watch?v=V96\\_PjlrVQc](http://www.youtube.com/watch?v=V96_PjlrVQc)

2) [http://www.youtube.com/watch?v=P0o\\_HLMZk8k&feature=related](http://www.youtube.com/watch?v=P0o_HLMZk8k&feature=related)

3) <http://www.youtube.com/watch?v=WlclGCOG0tU>

4) <http://www.youtube.com/watch?v=ngGD41-4VTo>

5) <http://www.youtube.com/watch?v=eOeWL2pKgg4&feature=related>

6) <http://www.youtube.com/watch?v=seKRKWB68FI&feature=related>

7) [http://mathplayground.com/hm\\_fractions.html](http://mathplayground.com/hm_fractions.html) (Game – Record Your Highest Score)

8) <http://mathplayground.com/Triplets/Triplets.html> (Game - Record Top Level & Speed)

#### 1.4 Introduction to Variable Expressions and Equations

1) [http://www.youtube.com/watch?v=ltCYm\\_f9SHA](http://www.youtube.com/watch?v=ltCYm_f9SHA)

2) <http://www.youtube.com/watch?v=wagNh0PFfvM>

3) <http://www.youtube.com/watch?v=a9YhNvlZg3A&feature=related>

4) <http://www.youtube.com/watch?v=HKUBGm5SEhI&feature=related>

5) <http://www.youtube.com/watch?v=HBaBLax9z-U&feature=related>

#### 1.5 Adding Real Numbers

1) <http://www.youtube.com/watch?v=DS88fasSxKU&feature=related>

2) <http://www.youtube.com/watch?v=R3uqqwOuuVo>

#### 1.6 Subtracting Real Numbers

1) <http://www.youtube.com/watch?v=oeqkrOTaBp8&feature=related>

2) <http://www.youtube.com/watch?v=72wbx4BUK7Q&feature=related>

3) <http://www.youtube.com/watch?v=YpC-KbEAE7I&feature=related>

#### 1.7 Multiplying and Dividing Real Numbers

1) <http://www.youtube.com/watch?v=UHIZUE5iW-c&feature=related>

2) <http://www.youtube.com/watch?v=9mEOnwr87xw&feature=related>

3) <http://www.youtube.com/watch?v=Rd9B4V2-LBM&feature=related>

#### Summary of Integer Operations

1) <http://www.youtube.com/watch?feature=endscreen&v=Xxi4ItFpUvw&NR=1>

2) <http://www.youtube.com/watch?v=Fq7eIte4VIM&feature=related>

#### 1.8 Properties of Real Numbers

1) <http://www.youtube.com/watch?v=3cGH2zTeAzo&feature=related>

2) [http://www.youtube.com/watch?v=7HFRH\\_M1nAc&feature=related](http://www.youtube.com/watch?v=7HFRH_M1nAc&feature=related)

3) <http://www.youtube.com/watch?v=QATuBNakVfA&feature=related>

4) <http://www.youtube.com/watch?v=iSuteidOkD4&feature=related>

## Chapter 2 – Equations, Inequalities, and Problem Solving

### 2.1 Combining Like Terms:

- 1) <http://www.youtube.com/watch?v=XwFJBZLbKC8>
- 2) <http://www.youtube.com/watch?v=hcL0fJoOGvA&feature=related>
- 3) <http://www.youtube.com/watch?v=jdE4KIDeEsc&feature=related>
- 4) <http://www.youtube.com/watch?v=BwypzLf4pCw&feature=related>

### 2.2 Solving Linear Equations I

- 1) <http://www.youtube.com/watch?v=BHZH9MpGEnQ>
- 2) <http://www.youtube.com/watch?v=HI2zobc5xqA&feature=related>
- 4) <http://www.youtube.com/watch?v=8GZooSmFop4&feature=related>

### 2.3 Solving Linear Equations II

- 3) <http://www.youtube.com/watch?v=J2TYyUftI8k&NR=1>
- 5) <http://www.youtube.com/watch?v=1HLGsKYoUUQ>
- 6) <http://www.youtube.com/watch?v=21FFHpA5riQ&feature=related>
- 7) <http://www.youtube.com/watch?v=DopnmxeMt-s>
- 8) <http://www.youtube.com/watch?v=Rx0739NUG6A>

### 2.4 Introduction to Solving Word Problems

- 1) <http://www.youtube.com/watch?v=uCS7GO0fkc4&feature=related>
- 2) <http://www.youtube.com/watch?v=m3ZwILTINrI&feature=related>
- 3) [http://www.youtube.com/watch?v=utJtcOkLe\\_A&feature=related](http://www.youtube.com/watch?v=utJtcOkLe_A&feature=related)
- 4) <http://www.youtube.com/watch?v=wWpJ-zT9r0c&feature=related>

### 2.5 Formulas and Solving Literal Equations

- 1) [http://www.youtube.com/watch?v=MKT\\_0jZ5Exo&feature=related](http://www.youtube.com/watch?v=MKT_0jZ5Exo&feature=related)
- 2) <http://www.youtube.com/watch?v=i23cZXplPhY>
- 3) <http://www.youtube.com/watch?v=Abi-3-EItI&feature=related>
- 4) <http://www.youtube.com/watch?v=vsq0e-QqoM&feature=related>

### 2.6 Percent

- 1) <http://www.youtube.com/watch?v=Wzoc1SafT94&feature=related>
- 2) <http://www.youtube.com/watch?v=SzUVdpHEuyY&feature=related>

### 2.8 Linear Inequalities

- 1) <http://www.youtube.com/watch?v=mnDcUPNJ3aA&feature=related>
- 2) <http://www.youtube.com/watch?v=EQKKV5SduaM>
- 3) <http://www.youtube.com/watch?v=AjZzACaeIco&NR=1>
- 4) [http://www.youtube.com/watch?v=Amg\\_5BAkwUg&feature=related](http://www.youtube.com/watch?v=Amg_5BAkwUg&feature=related)

## Chapter 3 – Graphs and Graphing Linear Equations

### 3.1 Reading Graphs and the Rectangular Coordinate System

- 1) <http://www.learnerstv.com/video/Free-video-Lecture-135-Maths.htm> (click "Dim the Lights")
- 2) <http://www.youtube.com/watch?v=HdrCwFNcXGU&feature=related>
- 3) <http://www.youtube.com/watch?v=BH3ngkv0ug8&feature=related>
- 4) [http://www.youtube.com/watch?v=vZ1Sf\\_pc5DM&feature=related](http://www.youtube.com/watch?v=vZ1Sf_pc5DM&feature=related)
- 5) [http://www.mathplayground.com/locate\\_aliens.html](http://www.mathplayground.com/locate_aliens.html) (click "Begin Game")
- 6) <http://www.mathplayground.com/spaceboyrescue.html> (click "Begin Game")

### 3.2 Graphing Using a Table of Values & Slope - Intercept Method

- 1) <http://www.youtube.com/watch?v=BqV5UCzPKkk&feature=related>
- 2) <http://www.youtube.com/watch?v=PD4HJmRnaiw>
- 3) <http://www.youtube.com/watch?v=qfI3DMiu7fE&feature=fvsr>
- 4) <http://www.youtube.com/watch?v=6cOv4nB1vCM&feature=related>
- 5) <http://www.youtube.com/watch?v=JD5X1Z1IhsQ&feature=related>
- 6) <http://www.youtube.com/watch?v=VAJRj8hST1c&feature=related>
- 7) <http://www.youtube.com/watch?v=PD4HJmRnaiw>

### 3.3 Graphing Lines using the intercepts

- 1) <http://www.youtube.com/watch?v=qMepbuVj8BU>
- 2) <http://www.youtube.com/watch?v=mxBoni8N70Y&feature=related>
- 3) <http://www.youtube.com/watch?v=KwBE2pJDWvU&feature=related>
- 4) <http://www.youtube.com/watch?v=mvsUD3tDnHk&feature=related>

## Chapter 4 – Systems of Equations

- 1) <http://www.youtube.com/watch?v=Br7qn4yLf-I&feature=related>
- 2) <http://www.youtube.com/watch?v=JQCFvzXa8Bo&feature=related>

### 4.1 Solving System of Equation by Graphing

- 1) <http://www.youtube.com/watch?v=RmM1n-zkyMQ>
- 2) <http://www.youtube.com/watch?v=r0j1OgDtRSk>

### 4.2 Solving Systems of Equations by Substitution

- 1) [http://www.youtube.com/watch?v=Mgu1ef\\_MqGc&feature=related](http://www.youtube.com/watch?v=Mgu1ef_MqGc&feature=related)
- 2) <http://www.youtube.com/watch?v=c5VB3F4OtXc&feature=related>

### 4.3 Solving Systems of Equations by Elimination (Addition Method)

- 1) <http://www.youtube.com/watch?v=JHC3KL0TfOM>
- 2) <http://www.youtube.com/watch?v=exI89n7R198>
- 3) <http://www.youtube.com/watch?v=71VuWNfR8MU&feature=relmfu>

## Chapter 5 – Exponents and Polynomials

### Chapter 5.1 Exponents and Exponential Rules

- 1) <http://www.youtube.com/watch?v=LVDHfmc3s60&feature=related>
- 2) [http://www.youtube.com/watch?v=VOsOj1O\\_CMQ](http://www.youtube.com/watch?v=VOsOj1O_CMQ)
- 3) <http://www.youtube.com/watch?v=dQ9A-o3dUIM&feature=related>
- 4) <http://www.youtube.com/watch?v=OGbL6QZW0Ls>
- 5) <http://www.youtube.com/watch?v=9svqGWwyN8Q>
- 6) <http://www.youtube.com/watch?v=BOTRnm0pbo8&feature=related>
- 7) <http://www.youtube.com/watch?v=QIiGT70fDpq&feature=related>

Several Extra Example Exercises:

- 1) <http://www.youtube.com/user/robichaudd?blend=1&ob=5#p/search/7/4ZYqLdhV5Dg>
- 2) <http://www.youtube.com/user/robichaudd?blend=1&ob=5#p/search/6/QwaEvkfsuUA>
- 3) <http://www.youtube.com/user/robichaudd?blend=1&ob=5#p/search/4/be-ni7QV1N4>
- 4) <http://www.youtube.com/user/robichaudd?blend=1&ob=5#p/search/3/UuzIm-vXvns>

### 5.2 Introduction to Polynomials

- 1) <http://www.youtube.com/watch?v=KheuSobDPO4>
- 2) <http://www.youtube.com/watch?v=aLnRMlc1azM&NR=1>
- 3) [http://www.youtube.com/watch?v=DivmLDas\\_8w&feature=related](http://www.youtube.com/watch?v=DivmLDas_8w&feature=related)

### 5.3 Operations with Polynomials - Add/Subtract

- 1) <http://www.youtube.com/watch?v=qD0xYUiEVOM&feature=related>
- 2) [http://www.youtube.com/watch?v=G\\_zn-CNO1zM&feature=related](http://www.youtube.com/watch?v=G_zn-CNO1zM&feature=related)
- 3) <http://www.youtube.com/watch?v=SFCz9HQ85FA&feature=related>

### 5.4 Operations with Polynomials - Multiply

- 1) <http://www.youtube.com/watch?v=17TAhGNNDTA&feature=related>
- 2) <http://www.youtube.com/watch?v=q0w7hLDMKMw&feature=related>
- 3) <http://www.youtube.com/watch?v=EI1EvQnzaP0&feature=related>
- 4) <http://www.youtube.com/watch?v=HATNS8WfPGw&NR=1>

### 5.5 Negative Exponents and Scientific Notation

- 1) <http://www.youtube.com/watch?v=H578gUeoBC0&feature=related>
- 2) <http://www.youtube.com/watch?v=sQ9zOPPGWjI&feature=related>
- 3) <http://www.youtube.com/watch?v=pqrijbBHJJiG>
- 4) <http://www.youtube.com/watch?v=1z2Gey2tb0s>

### 5.6 Operations with Polynomials - Divide

- 1) <http://www.youtube.com/watch?v=JTJqIXVhj74&feature=related>
- 2) <http://www.youtube.com/watch?v=Y64sSot3wmA>
- 3) <http://www.youtube.com/watch?v=il3fA5N-6pw&feature=related>
- 4) <http://www.youtube.com/watch?v=9iLXkFv1FM0&feature=related>