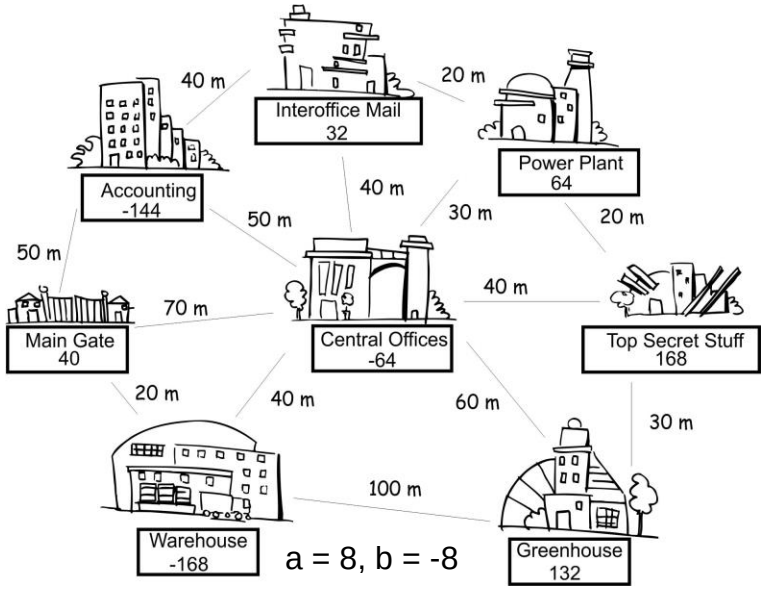
Corporate Complex

Below is a map of the Mitra Corp. building complex. There are 4 double coded letters that must reach their destination in the shortest distance.

Solve the codes for the letters' destination. Map a delivery route that is the shortest distance. Start at the Interoffice Mail building



a = 8, b = -8

✦	$= 3a - 2b$	△	$=ab + 5b$
▲	$=a^2 + b^2$	◆	$=3b - 2a$

Letter 1: ✦ + ▲ =_____ Letter 2: ◆ – ▲ = _____

Letter 3: △ + ◆ =_____ Letter 4: △ – ✦ = _____

The shortest route to take to deliver all the mail is:

1st _____ 2nd _____ 3rd _____ 4th _____

Total distance_____

ABSURD MATH Magazine

Algebra: *Letters and Numbers*
Using substitution to find solutions to problems

Issue 2 Volume 1

Top Secret Substitutions

Mail Room Mix Up

Everything is Top Secret at Mitra Corp. It even has special codes for all the different types of interoffice mail sent. A fellow worker has been careless and mixed up the mail. You must use the Mitra Corp. Codes to sort the mail so it can go to its correct location.

The codes use 3 different letters. Each letter has an assigned value. The destinations of the mail are found by the solution to variable expressions.

a = 12, b =3, c = 7

Match the values with the correct recipient.

Letter Code	Destination
#1: 2a -3b+12	Talking About It Department = **-18**
#2: a + 4b - 6c	Getting Things Done Department = **55**
#3: 5a – 12 +c	Putting Things Off Department = **80**
#4: 19b – 5c	Paying for It Department = **27**
#5: 8a + 4b -4c	Limited Service Department = **22**
	Say Nice Things Department = **37**

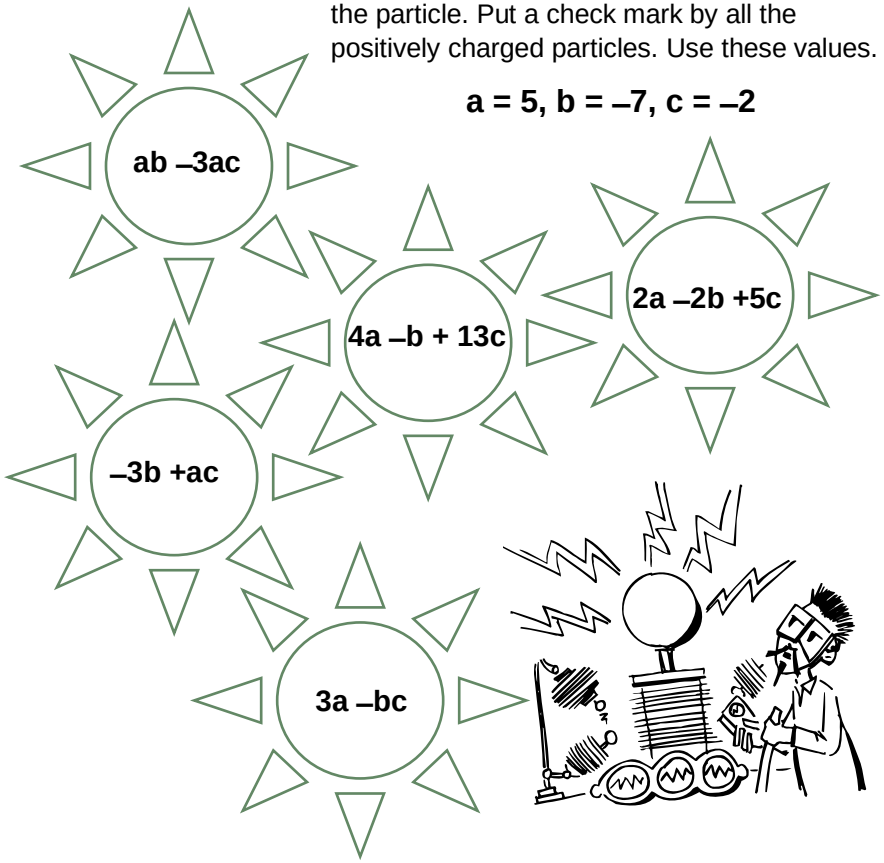
A New Form of Energy

Competition is fierce at the Top-Secret Stuff department of Mitra Corp. Dr. Nick Tesler is working on a new particle energy project. If his project is a success, it will mean a new form of energy is discovered.

He has 5 different particles, positive, negative, and neutral. He only wants to use **positively** charged particles. The particles charged is calculated by substituting values into the particles' expressions.

Substitute these values to determine charge of the particle. Put a check mark by all the positively charged particles. Use these values.

a = 5, b = –7, c = –2



Robots and Functions

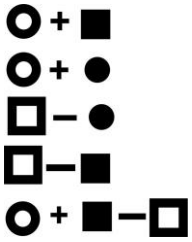
Mr. Kim, lead engineer of the Robotics department has developed a program that allows a human operator to press only 2 or 3 buttons to command a robot to do complex functions.

Because it is a top-secret project a lock code for each function has been installed into the robot's AI.

Solve the unlock code to gain permission to use the command functions. Use these values:

a= -3 and b = 5

○ = 2a - b ■ = a - b ● = b - a □ = a+b



value	Function

8 = Clean room 10 = drive car -8 = iron clothes

9= cook dinner 6 = build a wall -6 = repair self

7 = compose music -7 = fly plane

5 = medical diagnosis 11 = translate languages

-9 = teach math -10 = move a mountain