Exploring Linear Inequalities   For the Teacher
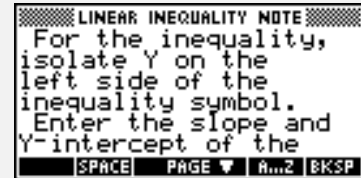
Objectives:

Using the **LINEAR INEQUALITY** aplet, the student will graphically solve a linear inequality.

Functionality:

When the student presses **START** , the **LINEAR INEQUALITY NOTE** will be displayed.

```
LINEAR INEQUALITY NOTE
 For the inequality,
isolate Y on the
left side of the
inequality symbol.
 Enter the slope and
Y-intercept of the
    SPACE  PAGE ▼ A...Z BKSP
```

After reading the note, the student should press **SKETCH** for further explanation.

```
                    ←y>.5x+3

 y≤.5x-2
 STO▶ NEWP   PAGE ▼  TEXT DRAW
```
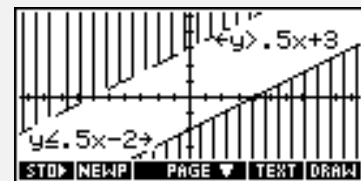
VIEWS allows the student to enter a new line and to select the type of inequality to be graphed.

```
DE  Enter New Line
   Graph Y>MX+B
   Graph Y≥MX+B
   Graph Y<MX+B
   Graph Y≤MX+B   ▼
                   CANCL  OK
```

Enter New Line prompts the student to enter the slope and the y-intercept of the boundry line.

```
             NEW LINE
      M = 2

 ENTER THE SLOPE■
 EDIT             CANCL  OK
```

After entering a slope and y-intercept, the student will be prompted to select a type of inequality.

```
   Enter New Line
   Graph Y>MX+B        ■
   Graph Y≥MX+B
   Graph Y<MX+B
   Graph Y≤MX+B   ▼
 ENTE
                   CANCL  OK
```
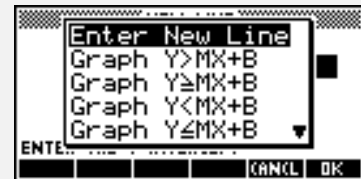
When the type of inequality has been selected, the graph of the inequality will be displayed. In addition to the graph, the inequality will be displayed in the top left corner of the screen.

```
Y<2*X-4
```
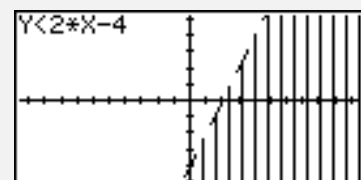
Programs associated with this aplet:
        .GRI.NL, .GRI.GT, .GRI.GE, .GRI.LT, .GRI.LE, .GRI.ST, .GRI.SV