Answers

**Algebra**

**Unit 3 Line Master 6g**

**Part 1**

8. The triangle moved 100 units to the right.

9. To move the triangle 100 units to the left, set ***translateXBy*** to **−100**.

**Part 2**

Here is what the new ***translateYShift*** subprogram should look like:Graphical user interface

Description automatically generated

The revised main program is shown on Master 6.

If students shift the original triangle as shown on Master 6,   
the stage will look like this:

Calendar

Description automatically generated

If students choose to shift the second triangle instead and use a pink pen colour for the vertical translation, the stage will look like this:

Calendar

Description automatically generated

Answers (cont’d)

**Algebra**

**Unit 3 Line Master 6h**

**Additional Challenges**

Graphical user interface, application

Description automatically generatedWhen you reflect in the *x*-axis, the *x*-coordinates of the image   
stay the same but the *y*-coordinates have the opposite sign.  
As shown on Master 6, the ***reflectXAxis*** subprogram should   
look like this:

Graphical user interface, diagram, text, application, chat or text message

Description automatically generatedThese 5 blocks should be added to the end   
of the main program (the pen colour choice   
may vary):

The output stage will look something like this:

Chart

Description automatically generated with medium confidence

Graphical user interface, application

Description automatically generatedWhen you reflect in the *y*-axis, the *y*-coordinates of   
the image stay the same but the *x*-coordinates have   
the opposite sign.  
The ***reflectYAxis*** subprogram should look like this:

Answers (cont’d)

**Algebra**

**Unit 3 Line Master 6i**

Graphical user interface, diagram, text, application, chat or text message

Description automatically generatedThese 5 blocks should be added to the end   
of the main program (the pen colour choice   
may vary):

The output stage will look something like this:

A picture containing chart

Description automatically generated

Text, application, chat or text message

Description automatically generatedThe answers shown for the final challenge assume that the challenges are completed in order, which is not essential.   
Students could do this last challenge without doing any of the previous challenges.

The ***ask and wait*** sensing block   
should be added to the main program   
before the first translated triangle   
is drawn.

The ***translateXBy*** variable should be   
set to equal the user’s **answer**.

Answers (cont’d)

**Algebra**

**Unit 3 Line Master 6j**

Graphical user interface

Description automatically generated

If all challenges are completed with the triangle position being reset each time and the user enters 150 for the horizontal translation,   
the output stage should look something like this:

Chart

Description automatically generated