

Rover Tracks

Rovers used on the Moon and on Mars left tracks that could sometimes be seen by satellites, showing exactly where the rovers had been. Visit <https://mars.nasa.gov/resources/5821/rover-tracks-near-husband-hill/> and <https://mars.nasa.gov/resources/6171/curiosity-and-rover-tracks-at-the-kimberley-april-2014/> to see some examples.

Pretend you are a rover and follow some simple commands to draw a shape. In the program below, the number following the **F** or **B** is the number of units you must move in that direction. The size of the unit is up to you – will it be one square on a piece of graph paper? One step? One meter?

Use a pencil, crayon or marker to trace your path if using graph paper. If you choose to walk the path instead, you can tape a piece of sidewalk chalk to a broom handle if you are walking on pavement or trace your path with a stick if you are walking in a sandy area.

COMMANDS:

F = move forward **B** = move backward **L** = turn left (90 degrees) **R** = turn right (90 degrees)

PROGRAM:

F14		F3		L		B14
R		L		F11		L
F3		F14		L		F9
-----		R		F7		R
R	Do this 6 times	F9		L		F7
F2		R		F8		R
L		F7		R		F8
F1		R		F7		B8
-----		F8		R		L
R		B8		F11		F7
F2		L		R		
L		F7		F14		

REMEMBER: When you are moving backward, **L** or **R** is for the direction you are **facing**, not the direction you are moving!

SHARE: What did you draw? Take a picture and share it on our Facebook page (Kennedy Space Center Visitor Complex).

THINK: What are some additional commands you could add to make it easier to draw a complex shape?

EXTEND: Create your own program and have someone else follow it. Did they draw the shape you expected?