

Table of Contents

Raster	1
Open	1
Close	2
List	2
Info	3
Value	4
Envelope	4
Get Style	6
Set Style	7
Add Raster	8
Add Constant	12
Subtract Raster	14
Subtract Constant	18
Multiply Raster	20
Multiply Constant	24
Divide Raster	26
Divide Constant	30
Contours	32
Crop	34
Mosaic	35
Reclassify	37
Reproject	39
Scale	40
Shaded Relief	42
Stylize	43
Polygon	45

Raster

Open

Open a Raster.

```
geo-shell> raster open --format earth --raster earth --name earth
```

Name	Description	Mandatory	Specified Default	Unspecified Default
format	The Format name	true		
raster	The Raster name	true		

name	The name	false		
------	----------	-------	--	--

```
geo-shell> format open --name earth --input src/test/resources/earth.tif
Format earth opened!
```

```
geo-shell> raster open --format earth --raster earth --name earth
Opened Format earth Raster earth as earth
```

```
geo-shell> raster close --name earth
Raster earth closed!
```

```
geo-shell> format close --name earth
Format earth closed!
```

Close

Close a Raster.

```
geo-shell> raster close --name earth
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		

```
geo-shell> format open --name earth --input src/test/resources/earth.tif
Format earth opened!
```

```
geo-shell> raster open --format earth --raster earth --name earth
Opened Format earth Raster earth as earth
```

```
geo-shell> raster close --name earth
Raster earth closed!
```

```
geo-shell> format close --name earth
Format earth closed!
```

List

List open Rasters.

```
geo-shell> raster list
```



No parameters

```
geo-shell> format open --name earth --input src/test/resources/earth.tif
Format earth opened!
```

```
geo-shell> raster open --format earth --raster earth --name earth
Opened Format earth Raster earth as earth
```

geo-shell> **raster list**

earth = GeoTIFF

geo-shell> **raster close** --name earth

Raster earth closed!

geo-shell> **format close** --name earth

Format earth closed!

Info

Get information about a Raster.

geo-shell> **raster info** --name earth

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		

geo-shell> **format open** --name earth --input src/test/resources/earth.tif

Format earth opened!

geo-shell> **raster open** --format earth --raster earth --name earth

Opened Format earth Raster earth as earth

geo-shell> **raster info** --name earth

Format: GeoTIFF

Size: 800, 400

Projection ID: EPSG:4326

Projection WKT: GEOGCS["WGS 84",

DATUM["World Geodetic System 1984",

SPHEROID["WGS 84", 6378137.0, 298.257223563, AUTHORITY["EPSG","7030"]],

AUTHORITY["EPSG","6326"]],

PRIMEM["Greenwich", 0.0, AUTHORITY["EPSG","8901"]],

UNIT["degree", 0.017453292519943295],

AXIS["Geodetic longitude", EAST],

AXIS["Geodetic latitude", NORTH],

AUTHORITY["EPSG","4326"]]

Extent: -179.99999999999997, -89.999999999998205, 179.999999999996405, 90.0

Pixel Size: 0.44999999999995505, 0.4499999999999551

Block Size: 800, 8

Bands:

RED_BAND

Min Value: 56.0 Max Value: 255.0

GREEN_BAND

Min Value: 84.0 Max Value: 255.0

BLUE_BAND

Min Value: 91.0 Max Value: 255.0

```
geo-shell> raster close --name earth
Raster earth closed!
```

```
geo-shell> format close --name earth
Format earth closed!
```

Value

Get a value from the Raster.

```
geo-shell> raster value --name earth --x 60 --y 45
```

```
geo-shell> raster value --name earth --x 10 --y 15 --type pixel
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
band	The x coordinate	false	0	0
x	The x coordinate	true		
y	The y coordinate	true		
type	The y coordinate	false	geometry	geometry

```
geo-shell> format open --name earth --input src/test/resources/earth.tif
Format earth opened!
```

```
geo-shell> raster open --format earth --raster earth --name earth
Opened Format earth Raster earth as earth
```

```
geo-shell> raster value --name earth --x 60 --y 45
235.0
```

```
geo-shell> raster value --name earth --x 10 --y 15 --type pixel
109.0
```

```
geo-shell> raster close --name earth
Raster earth closed!
```

```
geo-shell> format close --name earth
Format earth closed!
```

Envelope

Create a Vector Layer from the envelope of a Raster.

```
geo-shell> raster envelope --name earth --output-workspace layers --output-name outline
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		

geo-shell> **format open** --name earth --input src/test/resources/earth.tif
Format earth opened!

geo-shell> **raster open** --format earth --raster earth --name earth
Opened Format earth Raster earth as earth

geo-shell> **workspace open** --name layers --params memory
Workspace layers opened!

geo-shell> **raster envelope** --name earth --output-workspace layers --output-name outline
Done creating envelope in outline from earth!

geo-shell> **style create** --params "stroke=black stroke-width=3" --file examples/outline.sld
Style stroke=black stroke-width=3 written to /home/runner/work/geo-shell/geo-shell/examples/outline.sld!

geo-shell> **layer style set** --name outline --style examples/outline.sld
Style /home/runner/work/geo-shell/geo-shell/examples/outline.sld set on outline

geo-shell> **map open** --name map
Map map opened!

geo-shell> **map add raster** --name map --raster earth
Added earth layer to map map

geo-shell> **map add layer** --name map --layer outline
Added outline layer to map map

geo-shell> **map draw** --name map --file examples/raster_envelope.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_envelope.png!

geo-shell> **map close** --name map
Map map closed!



Get Style

Get the Raster's style.

```
geo-shell> raster style get --name pc --style examples/pc_style.sld
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
style	The SLD File	false		

```
geo-shell> format open --name pierce_county --input src/test/resources/pc.tif
Format pierce_county opened!
```

```
geo-shell> raster open --format pierce_county --raster pc --name pc
Opened Format pierce_county Raster pc as pc
```

```
geo-shell>          style          raster          colormap          --raster          pc          --values
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffffff5"          --file
examples/style_raster_colormap.sld
Colormap Raster Style for pc written to /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld!
```

```
geo-shell> raster style set --name pc --style examples/style_raster_colormap.sld
Style /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld set on pc
```

```
geo-shell> map open --name map
Map map opened!
```

```
geo-shell> map add raster --name map --raster pc
```

Added pc layer to map map

```
geo-shell> map draw --name map --file examples/raster_style_get.png
```

Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_style_get.png!

```
geo-shell> map close --name map
```

Map map closed!

```
geo-shell> raster style get --name pc --style examples/pc_style.sld
```

pc style written to /home/runner/work/geo-shell/geo-shell/examples/pc_style.sld



Set Style

Set a Raster's style

```
geo-shell> raster style set --name pc --style examples/style_raster_colormap.sld
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
style	The SLD or CSS File	true		

```
geo-shell> format open --name pierce_county --input src/test/resources/pc.tif
```

Format pierce_county opened!

```
geo-shell> raster open --format pierce_county --raster pc --name pc
```

Opened Format pierce_county Raster pc as pc

```
geo-shell> style raster colormap --raster pc --values  
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffffff5"  
--file  
examples/style_raster_colormap.sld  
Colormap Raster Style for pc written to /home/runner/work/geo-shell/geo-  
shell/examples/style_raster_colormap.sld!
```

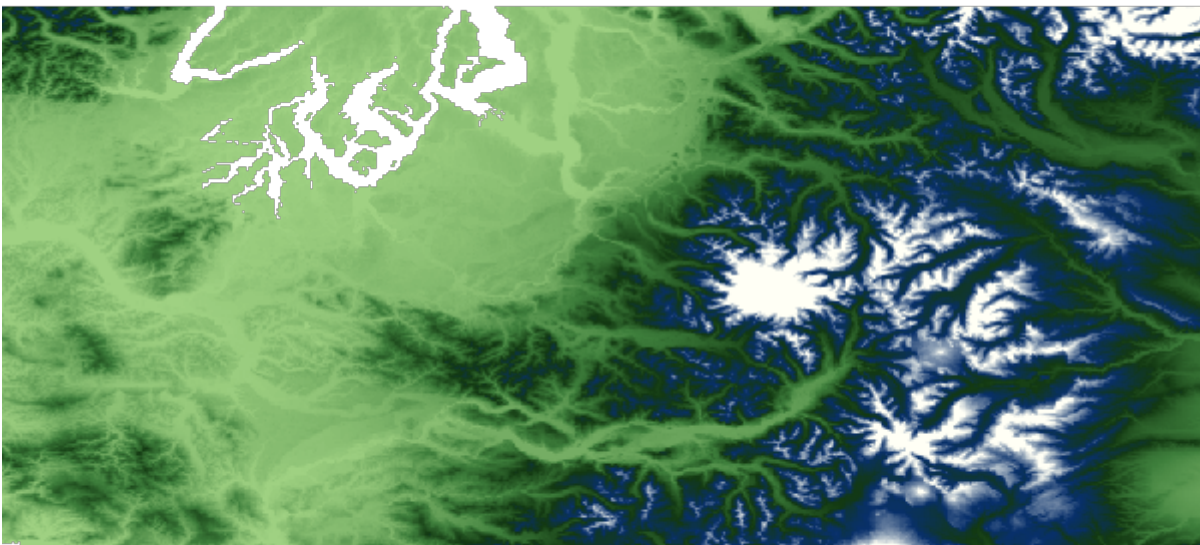
```
geo-shell> raster style set --name pc --style examples/style_raster_colormap.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld set on pc
```

```
geo-shell> map open --name map  
Map map opened!
```

```
geo-shell> map add raster --name map --raster pc  
Added pc layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_style_set.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_style_set.png!
```

```
geo-shell> map close --name map  
Map map closed!
```



Add Raster

Add two Rasters together

```
geo-shell> raster add raster --name1 high --name2 low --output-format add --output-name add
```


Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

geo-shell> **format open** --name high --input src/test/resources/high.tif
Format high opened!

geo-shell> **raster open** --format high --raster high --name high
Opened Format high Raster high as high

geo-shell> **workspace open** --name layers --params memory
Workspace layers opened!

geo-shell> **style create** --params "stroke=black stroke-width=2 label=value label-size=12" --file examples/grid.sld
Style stroke=black stroke-width=2 label=value label-size=12 written to /home/runner/work/geo-shell/geo-shell/examples/grid.sld!

geo-shell> **raster polygon** --name high --output-workspace layers --output-name high_polygons
Done converting Raster high to a Polygon Layer high_polygons!

geo-shell> **style raster palette colormap** --min 1 --max 50 --palette MutedTerrain --number 20 --file examples/high.sld
Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/high.sld!

geo-shell> **raster style set** --name high --style examples/high.sld
Style /home/runner/work/geo-shell/geo-shell/examples/high.sld set on high

geo-shell> **layer style set** --name high_polygons --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on high_polygons

geo-shell> **map open** --name mapHigh
Map mapHigh opened!

geo-shell> **map add raster** --name mapHigh --raster high
Added high layer to map mapHigh

geo-shell> **map add layer** --name mapHigh --layer high_polygons
Added high_polygons layer to map mapHigh

geo-shell> **map draw** --name mapHigh --file examples/raster_add_raster_high.png --bounds "-180,-90,180,90,EPSG:4326"
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_add_raster_high.png!

```
geo-shell> map close --name mapHigh  
Map mapHigh closed!
```

17.0	18.0	19.0	20.0
13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0

```
geo-shell> format open --name low --input src/test/resources/low.tif  
Format low opened!
```

```
geo-shell> raster open --format low --raster low --name low  
Opened Format low Raster low as low
```

```
geo-shell> raster polygon --name low --output-workspace layers --output-name low_polygons  
Done converting Raster low to a Polygon Layer low_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file  
examples/low.sld  
Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/low.sld!
```

```
geo-shell> raster style set --name low --style examples/low.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/low.sld set on low
```

```
geo-shell> layer style set --name low_polygons --style examples/grid.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on low_polygons
```

```
geo-shell> map open --name mapLow  
Map mapLow opened!
```

```
geo-shell> map add raster --name mapLow --raster low  
Added low layer to map mapLow
```

```
geo-shell> map add layer --name mapLow --layer low_polygons  
Added low_polygons layer to map mapLow
```

```
geo-shell> map draw --name mapLow --file examples/raster_add_raster_low.png --bounds "-180,-90,180,90,EPSG:4326"
```

Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_add_raster_low.png!

```
geo-shell> map close --name mapLow
```

Map mapLow closed!

13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0
1.0	2.0	3.0	4.0

```
geo-shell> format open --name add --input examples/add.tif
```

Format add opened!

```
geo-shell> raster add raster --name1 high --name2 low --output-format add --output-name add
```

Added high to low to create add!

```
geo-shell> raster polygon --name add --output-workspace layers --output-name add_polygons
```

Done converting Raster add to a Polygon Layer add_polygons!

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file examples/add.sld
```

Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/add.sld!

```
geo-shell> raster style set --name add --style examples/add.sld
```

Style /home/runner/work/geo-shell/geo-shell/examples/add.sld set on add

```
geo-shell> layer style set --name add_polygons --style examples/grid.sld
```

Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on add_polygons

```
geo-shell> map open --name mapAdd
```

Map mapAdd opened!

```
geo-shell> map add raster --name mapAdd --raster add
```

Added add layer to map mapAdd

```
geo-shell> map add layer --name mapAdd --layer add_polygons
Added add_polygons layer to map mapAdd
```

```
geo-shell> map draw --name mapAdd --file examples/raster_add_raster_add.png --bounds "-180,-90,180,90,EPSG:4326"
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_add_raster_add.png!
```

```
geo-shell> map close --name mapAdd
Map mapAdd closed!
```

30.0	32.0	34.0	36.0
22.0	24.0	26.0	28.0
14.0	16.0	18.0	20.0
6.0	8.0	10.0	12.0

Add Constant

Add constant values to a Raster

```
geo-shell> raster add constant --name pc --output-format pcAdd100 --output-name pcAdd100
--values 100
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
values	The values	true		

geo-shell> **format open** --name pierce_county --input src/test/resources/pc.tif
Format pierce_county opened!

geo-shell> **raster open** --format pierce_county --raster pc --name pc
Opened Format pierce_county Raster pc as pc

geo-shell> **raster value** --name pc --x -121.799927 --y 46.867703
3069.0

geo-shell> **format open** --name pcAdd100 --input examples/pcAdd100.tif
Format pcAdd100 opened!

geo-shell> **raster add constant** --name pc --output-format pcAdd100 --output-name pcAdd100
--values 100
Added 100 to pc to create pcAdd100!

geo-shell> **raster value** --name pcAdd100 --x -121.799927 --y 46.867703
3169.0

geo-shell> **style raster colormap** --raster pcAdd100 --values
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffff5"
--file
examples/style_raster_colormap.sld
Colormap Raster Style for pcAdd100 written to /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld!

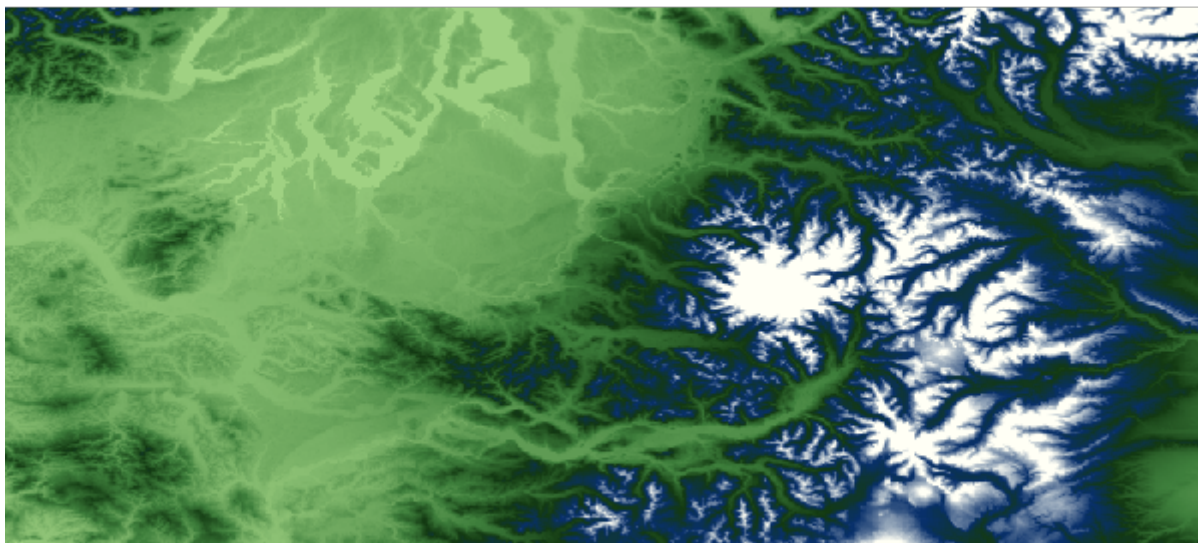
geo-shell> **raster style set** --name pcAdd100 --style examples/style_raster_colormap.sld
Style /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld set on pcAdd100

geo-shell> **map open** --name map
Map map opened!

geo-shell> **map add raster** --name map --raster pcAdd100
Added pcAdd100 layer to map map

geo-shell> **map draw** --name map --file examples/raster_add_constant.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_add_constant.png!

geo-shell> **map close** --name map
Map map closed!



Subtract Raster

Subtract one Raster from another

```
geo-shell> raster subtract raster --name1 high --name2 low --output-format subtract --output-name subtract
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

```
geo-shell> format open --name high --input src/test/resources/high.tif  
Format high opened!
```

```
geo-shell> raster open --format high --raster high --name high  
Opened Format high Raster high as high
```

```
geo-shell> workspace open --name layers --params memory  
Workspace layers opened!
```

```
geo-shell> style create --params "stroke=black stroke-width=2 label=value label-size=12" --file examples/grid.sld
```

Style stroke=black stroke-width=2 label=value label-size=12 written to /home/runner/work/geo-shell/geo-shell/examples/grid.sld!

geo-shell> **raster polygon** --name high --output-workspace layers --output-name high_polygons
Done converting Raster high to a Polygon Layer high_polygons!

geo-shell> **style raster palette colormap** --min 1 --max 50 --palette MutedTerrain --number 20 --file examples/high.sld

Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/high.sld!

geo-shell> **raster style set** --name high --style examples/high.sld
Style /home/runner/work/geo-shell/geo-shell/examples/high.sld set on high

geo-shell> **layer style set** --name high_polygons --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on high_polygons

geo-shell> **map open** --name mapHigh
Map mapHigh opened!

geo-shell> **map add raster** --name mapHigh --raster high
Added high layer to map mapHigh

geo-shell> **map add layer** --name mapHigh --layer high_polygons
Added high_polygons layer to map mapHigh

geo-shell> **map draw** --name mapHigh --file examples/raster_subtract_raster_high.png --bounds "-180,-90,180,90,EPSG:4326"
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_subtract_raster_high.png!

geo-shell> **map close** --name mapHigh
Map mapHigh closed!

17.0	18.0	19.0	20.0
13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0

```
geo-shell> format open --name low --input src/test/resources/low.tif
Format low opened!
```

```
geo-shell> raster open --format low --raster low --name low
Opened Format low Raster low as low
```

```
geo-shell> raster polygon --name low --output-workspace layers --output-name low_polygons
Done converting Raster low to a Polygon Layer low_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file
examples/low.sld
Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/low.sld!
```

```
geo-shell> raster style set --name low --style examples/low.sld
Style /home/runner/work/geo-shell/geo-shell/examples/low.sld set on low
```

```
geo-shell> layer style set --name low_polygons --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on low_polygons
```

```
geo-shell> map open --name mapLow
Map mapLow opened!
```

```
geo-shell> map add raster --name mapLow --raster low
Added low layer to map mapLow
```

```
geo-shell> map add layer --name mapLow --layer low_polygons
Added low_polygons layer to map mapLow
```

```
geo-shell> map draw --name mapLow --file examples/raster_subtract_raster_low.png --bounds "-
180,-90,180,90,EPSG:4326"
```


Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_subtract_raster_low.png!

```
geo-shell> map close --name mapLow  
Map mapLow closed!
```

13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0
1.0	2.0	3.0	4.0

```
geo-shell> format open --name subtract --input examples/subtract.tif  
Format subtract opened!
```

```
geo-shell> raster subtract raster --name1 high --name2 low --output-format subtract --output-name  
subtract  
Subtracted high from low to create subtract!
```

```
geo-shell> raster polygon --name subtract --output-workspace layers --output-name  
subtract_polygons  
Done converting Raster subtract to a Polygon Layer subtract_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file  
examples/subtract.sld  
Colormap    Palette    Raster    Style    written    to    /home/runner/work/geo-shell/geo-  
shell/examples/subtract.sld!
```

```
geo-shell> raster style set --name subtract --style examples/subtract.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/subtract.sld set on subtract
```

```
geo-shell> layer style set --name subtract_polygons --style examples/grid.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on subtract_polygons
```

```
geo-shell> map open --name mapSubtract  
Map mapSubtract opened!
```

```

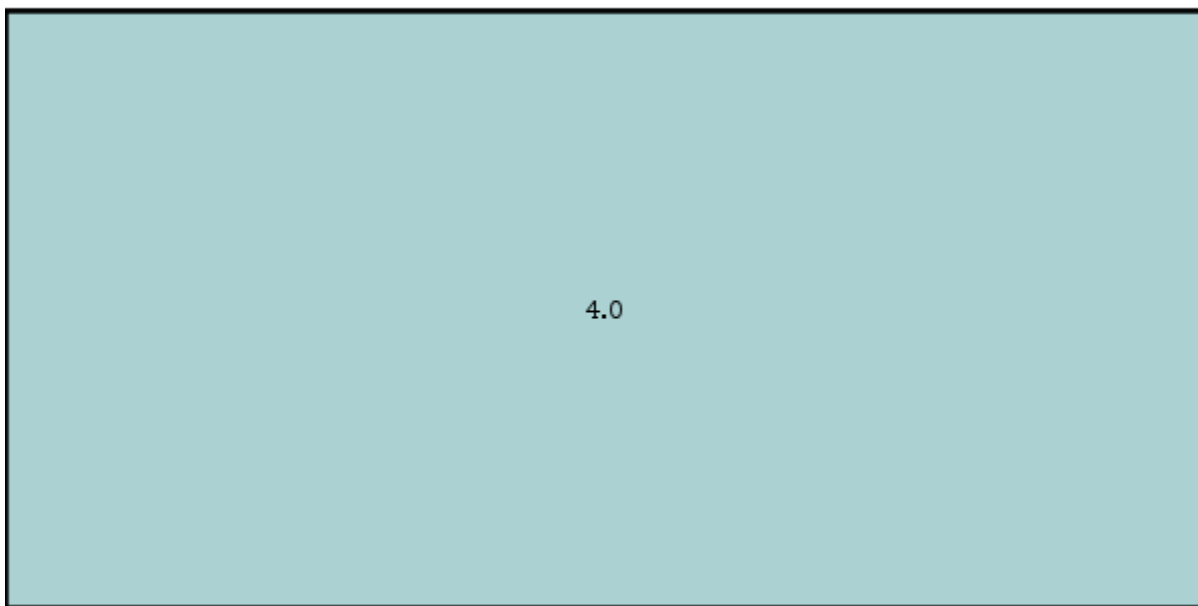
geo-shell> map add raster --name mapSubtract --raster subtract
Added subtract layer to map mapSubtract

geo-shell> map add layer --name mapSubtract --layer subtract_polygons
Added subtract_polygons layer to map mapSubtract

geo-shell> map draw --name mapSubtract --file examples/raster_subtract_raster_subtract.png
--bounds "-180,-90,180,90,EPSG:4326"
Done                                drawing                                /home/runner/work/geo-shell/geo-
shell/examples/raster_subtract_raster_subtract.png!

geo-shell> map close --name mapSubtract
Map mapSubtract closed!

```



Subtract Constant

Subtract constant values from a Raster

```

geo-shell> raster subtract constant --name pc --output-format pcMinus100 --output-name
pcMinus100 --values 100

```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		

output-name	The output Raster name	false		
values	The values	true		
from	Whether to subtract the Raster from the constant or vice verse	false	false	false

geo-shell> **format open** --name pierce_county --input src/test/resources/pc.tif
Format pierce_county opened!

geo-shell> **raster open** --format pierce_county --raster pc --name pc
Opened Format pierce_county Raster pc as pc

geo-shell> **raster value** --name pc --x -121.799927 --y 46.867703
3069.0

geo-shell> **format open** --name pcMinus100 --input examples/pcMinus100.tif
Format pcMinus100 opened!

geo-shell> **raster subtract constant** --name pc --output-format pcMinus100 --output-name pcMinus100 --values 100
Subtracted 100 from pc to create pcMinus100!

geo-shell> **raster value** --name pcMinus100 --x -121.799927 --y 46.867703
2969.0

geo-shell> **style raster colormap** --raster pcMinus100 --values "25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#fffff5" --file examples/style_raster_colormap.sld
Colormap Raster Style for pcMinus100 written to /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld!

geo-shell> **raster style set** --name pcMinus100 --style examples/style_raster_colormap.sld
Style /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld set on pcMinus100

geo-shell> **map open** --name map
Map map opened!

geo-shell> **map add raster** --name map --raster pcMinus100
Added pcMinus100 layer to map map

geo-shell> **map draw** --name map --file examples/raster_subtract_constant.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_subtract_constant.png!

geo-shell> **map close** --name map
Map map closed!



Multiply Raster

Multiply two Raster together

```
geo-shell> raster multiply raster --name1 high --name2 low --output-format multiply --output
-name multiply
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

```
geo-shell> format open --name high --input src/test/resources/high.tif
Format high opened!
```

```
geo-shell> raster open --format high --raster high --name high
Opened Format high Raster high as high
```

```
geo-shell> workspace open --name layers --params memory
Workspace layers opened!
```

```
geo-shell> style create --params "stroke=black stroke-width=2 label=value label-size=12" --file
examples/grid.sld
```

Style stroke=black stroke-width=2 label=value label-size=12 written to /home/runner/work/geo-shell/geo-shell/examples/grid.sld!

geo-shell> **raster polygon** --name high --output-workspace layers --output-name high_polygons
Done converting Raster high to a Polygon Layer high_polygons!

geo-shell> **style raster palette colormap** --min 1 --max 50 --palette MutedTerrain --number 20 --file examples/high.sld

Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/high.sld!

geo-shell> **raster style set** --name high --style examples/high.sld
Style /home/runner/work/geo-shell/geo-shell/examples/high.sld set on high

geo-shell> **layer style set** --name high_polygons --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on high_polygons

geo-shell> **map open** --name mapHigh
Map mapHigh opened!

geo-shell> **map add raster** --name mapHigh --raster high
Added high layer to map mapHigh

geo-shell> **map add layer** --name mapHigh --layer high_polygons
Added high_polygons layer to map mapHigh

geo-shell> **map draw** --name mapHigh --file examples/raster_multiply_raster_high.png --bounds "-180,-90,180,90,EPSG:4326"
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_multiply_raster_high.png!

geo-shell> **map close** --name mapHigh
Map mapHigh closed!

17.0	18.0	19.0	20.0
13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0

```
geo-shell> format open --name low --input src/test/resources/low.tif
Format low opened!
```

```
geo-shell> raster open --format low --raster low --name low
Opened Format low Raster low as low
```

```
geo-shell> raster polygon --name low --output-workspace layers --output-name low_polygons
Done converting Raster low to a Polygon Layer low_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file
examples/low.sld
Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/low.sld!
```

```
geo-shell> raster style set --name low --style examples/low.sld
Style /home/runner/work/geo-shell/geo-shell/examples/low.sld set on low
```

```
geo-shell> layer style set --name low_polygons --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on low_polygons
```

```
geo-shell> map open --name mapLow
Map mapLow opened!
```

```
geo-shell> map add raster --name mapLow --raster low
Added low layer to map mapLow
```

```
geo-shell> map add layer --name mapLow --layer low_polygons
Added low_polygons layer to map mapLow
```

```
geo-shell> map draw --name mapLow --file examples/raster_multiply_raster_low.png --bounds "-
180,-90,180,90,EPSG:4326"
```

Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_multiply_raster_low.png!

```
geo-shell> map close --name mapLow  
Map mapLow closed!
```

13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0
1.0	2.0	3.0	4.0

```
geo-shell> format open --name multiply --input examples/multiply.tif  
Format multiply opened!
```

```
geo-shell> raster multiply raster --name1 high --name2 low --output-format multiply --output  
-name multiply  
Multiplied high and low to create multiply!
```

```
geo-shell> raster polygon --name multiply --output-workspace layers --output-name  
multiply_polygons  
Done converting Raster multiply to a Polygon Layer multiply_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file  
examples/multiply.sld  
Colormap   Palette   Raster   Style   written   to   /home/runner/work/geo-shell/geo-  
shell/examples/multiply.sld!
```

```
geo-shell> raster style set --name multiply --style examples/multiply.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/multiply.sld set on multiply
```

```
geo-shell> layer style set --name multiply_polygons --style examples/grid.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on multiply_polygons
```

```
geo-shell> map open --name mapSubtract  
Map mapSubtract opened!
```

```
geo-shell> map add raster --name mapSubtract --raster multiply
```

Added multiply layer to map mapSubtract

```
geo-shell> map add layer --name mapSubtract --layer multiply_polygons
```

Added multiply_polygons layer to map mapSubtract

```
geo-shell> map draw --name mapSubtract --file examples/raster_multiply_raster_multiply.png  
--bounds "-180,-90,180,90,EPSG:4326"
```

Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_multiply_raster_multiply.png!

```
geo-shell> map close --name mapSubtract
```

Map mapSubtract closed!

221.0	252.0	285.0	320.0
117.0	140.0	165.0	192.0
45.0	60.0	77.0	96.0
5.0	12.0	21.0	32.0

Multiply Constant

Multiply constant values to a Raster

```
geo-shell> raster multiply constant --name pc --output-format pcTimes2 --output-name pcTimes2  
--values 2
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		

output-name	The output Raster name	false		
values	The values	true		

```
geo-shell> format open --name pierce_county --input src/test/resources/pc.tif
Format pierce_county opened!
```

```
geo-shell> raster open --format pierce_county --raster pc --name pc
Opened Format pierce_county Raster pc as pc
```

```
geo-shell> raster value --name pc --x -121.799927 --y 46.867703
3069.0
```

```
geo-shell> format open --name pcTimes2 --input examples/pcTimes2.tif
Format pcTimes2 opened!
```

```
geo-shell> raster multiply constant --name pc --output-format pcTimes2 --output-name pcTimes2
--values 2
Multiplied pc by 2 to create pcTimes2!
```

```
geo-shell> raster value --name pcTimes2 --x -121.799927 --y 46.867703
6138.0
```

```
geo-shell> style raster colormap --raster pcTimes2 --values
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffff5" --file
examples/style_raster_colormap.sld
Colormap Raster Style for pcTimes2 written to /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld!
```

```
geo-shell> raster style set --name pcTimes2 --style examples/style_raster_colormap.sld
Style /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld set on pcTimes2
```

```
geo-shell> map open --name map
Map map opened!
```

```
geo-shell> map add raster --name map --raster pcTimes2
Added pcTimes2 layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_multiply_constant.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_multiply_constant.png!
```

```
geo-shell> map close --name map
Map map closed!
```



Divide Raster

Divide one Raster by another Raster

```
geo-shell> raster divide raster --name1 high --name2 low --output-format divide --output-name divide
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

```
geo-shell> format open --name high --input src/test/resources/high.tif  
Format high opened!
```

```
geo-shell> raster open --format high --raster high --name high  
Opened Format high Raster high as high
```

```
geo-shell> workspace open --name layers --params memory  
Workspace layers opened!
```

```
geo-shell> style create --params "stroke=black stroke-width=2 label=value label-size=12" --file examples/grid.sld
```

Style stroke=black stroke-width=2 label=value label-size=12 written to /home/runner/work/geo-shell/geo-shell/examples/grid.sld!

geo-shell> **raster polygon** --name high --output-workspace layers --output-name high_polygons
Done converting Raster high to a Polygon Layer high_polygons!

geo-shell> **style raster palette colormap** --min 1 --max 50 --palette MutedTerrain --number 20 --file examples/high.sld

Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/high.sld!

geo-shell> **raster style set** --name high --style examples/high.sld
Style /home/runner/work/geo-shell/geo-shell/examples/high.sld set on high

geo-shell> **layer style set** --name high_polygons --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on high_polygons

geo-shell> **map open** --name mapHigh
Map mapHigh opened!

geo-shell> **map add raster** --name mapHigh --raster high
Added high layer to map mapHigh

geo-shell> **map add layer** --name mapHigh --layer high_polygons
Added high_polygons layer to map mapHigh

geo-shell> **map draw** --name mapHigh --file examples/raster_divide_raster_high.png --bounds "-180,-90,180,90,EPSG:4326"
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_divide_raster_high.png!

geo-shell> **map close** --name mapHigh
Map mapHigh closed!

17.0	18.0	19.0	20.0
13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0

```
geo-shell> format open --name low --input src/test/resources/low.tif
Format low opened!
```

```
geo-shell> raster open --format low --raster low --name low
Opened Format low Raster low as low
```

```
geo-shell> raster polygon --name low --output-workspace layers --output-name low_polygons
Done converting Raster low to a Polygon Layer low_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file
examples/low.sld
Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/low.sld!
```

```
geo-shell> raster style set --name low --style examples/low.sld
Style /home/runner/work/geo-shell/geo-shell/examples/low.sld set on low
```

```
geo-shell> layer style set --name low_polygons --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on low_polygons
```

```
geo-shell> map open --name mapLow
Map mapLow opened!
```

```
geo-shell> map add raster --name mapLow --raster low
Added low layer to map mapLow
```

```
geo-shell> map add layer --name mapLow --layer low_polygons
Added low_polygons layer to map mapLow
```

```
geo-shell> map draw --name mapLow --file examples/raster_divide_raster_low.png --bounds "-180,-
90,180,90,EPSG:4326"
```

Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_divide_raster_low.png!

```
geo-shell> map close --name mapLow  
Map mapLow closed!
```

13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0
1.0	2.0	3.0	4.0

```
geo-shell> format open --name divide --input examples/divide.tif  
Format divide opened!
```

```
geo-shell> raster divide raster --name1 high --name2 low --output-format divide --output-name  
divide  
Divided high by low to create divide!
```

```
geo-shell> raster polygon --name divide --output-workspace layers --output-name divide_polygons  
Done converting Raster divide to a Polygon Layer divide_polygons!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file  
examples/divide.sld  
Colormap   Palette   Raster   Style   written   to   /home/runner/work/geo-shell/geo-  
shell/examples/divide.sld!
```

```
geo-shell> raster style set --name divide --style examples/divide.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/divide.sld set on divide
```

```
geo-shell> layer style set --name divide_polygons --style examples/grid.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on divide_polygons
```

```
geo-shell> map open --name mapSubtract  
Map mapSubtract opened!
```

```
geo-shell> map add raster --name mapSubtract --raster divide
```

Added divide layer to map mapSubtract

```
geo-shell> map add layer --name mapSubtract --layer divide_polygons
```

Added divide_polygons layer to map mapSubtract

```
geo-shell> map draw --name mapSubtract --file examples/raster_divide_raster_divide.png --bounds "-180,-90,180,90,EPSG:4326"
```

Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_divide_raster_divide.png!

```
geo-shell> map close --name mapSubtract
```

Map mapSubtract closed!

1.307692289352417	1.2857142686843872	1.2666666507720947	1.25
1.4444444179534912	1.399999976158142	1.3636363744735718	1.3333333730697632
1.7999999523162842	1.6666666269302368	1.5714285373687744	1.5
5.0	3.0	2.3333332538604736	2.0

Divide Constant

Divide constant values against a Raster

```
geo-shell> raster divide constant --name pc --output-format pcDividedBy2 --output-name pcDividedBy2 --values 2
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
values	The values	true		

geo-shell> **format open** --name pierce_county --input src/test/resources/pc.tif
Format pierce_county opened!

geo-shell> **raster open** --format pierce_county --raster pc --name pc
Opened Format pierce_county Raster pc as pc

geo-shell> **raster value** --name pc --x -121.799927 --y 46.867703
3069.0

geo-shell> **format open** --name pcDividedBy2 --input examples/pcDividedBy2.tif
Format pcDividedBy2 opened!

geo-shell> **raster divide constant** --name pc --output-format pcDividedBy2 --output-name pcDividedBy2 --values 2
Divided pc by 2 to create pcDividedBy2!

geo-shell> **raster value** --name pcDividedBy2 --x -121.799927 --y 46.867703
1534.5

geo-shell> **style raster colormap** --raster pcDividedBy2 --values "25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffff5"
--file examples/style_raster_colormap.sld
Colormap Raster Style for pcDividedBy2 written to /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld!

geo-shell> **raster style set** --name pcDividedBy2 --style examples/style_raster_colormap.sld
Style /home/runner/work/geo-shell/geo-shell/examples/style_raster_colormap.sld set on pcDividedBy2

geo-shell> **map open** --name map
Map map opened!

geo-shell> **map add raster** --name map --raster pcDividedBy2
Added pcDividedBy2 layer to map map

geo-shell> **map draw** --name map --file examples/raster_divide_constant.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_divide_constant.png!

geo-shell> **map close** --name map
Map map closed!



Contours

Create contours.

```
geo-shell> raster contours --name pc --output-workspace contours --output-name contours --levels 0,100,200,300,600,900
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		
band	The Raster band to contour	false	0	0
levels	The contour level or interval	true		
simplify	Whether to simplify	false	false	false
smooth	Whether to smooth	false	false	false
bounds	The Bounds	false		

```
geo-shell> format open --name pc --input src/test/resources/pc.tif
```


Format pc opened!

```
geo-shell> raster open --format pc --raster pc --name pc  
Opened Format pc Raster pc as pc
```

```
geo-shell> style raster colormap --raster pc --values  
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#fffff5" --file examples/pc.sld  
Colormap Raster Style for pc written to /home/runner/work/geo-shell/geo-shell/examples/pc.sld!
```

```
geo-shell> raster style set --name pc --style examples/pc.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/pc.sld set on pc
```

```
geo-shell> workspace open --name contours --params examples/contours.shp  
Workspace contours opened!
```

```
geo-shell> raster contours --name pc --output-workspace contours --output-name contours --levels  
0,100,200,300,600,900  
Done creating contours!
```

```
geo-shell> style create --params "stroke=black stroke-width=0.25" --file examples/contours.sld  
Style stroke=black stroke-width=0.25 written to /home/runner/work/geo-shell/geo-shell/examples/contours.sld!
```

```
geo-shell> layer style set --name contours --style examples/contours.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/contours.sld set on contours
```

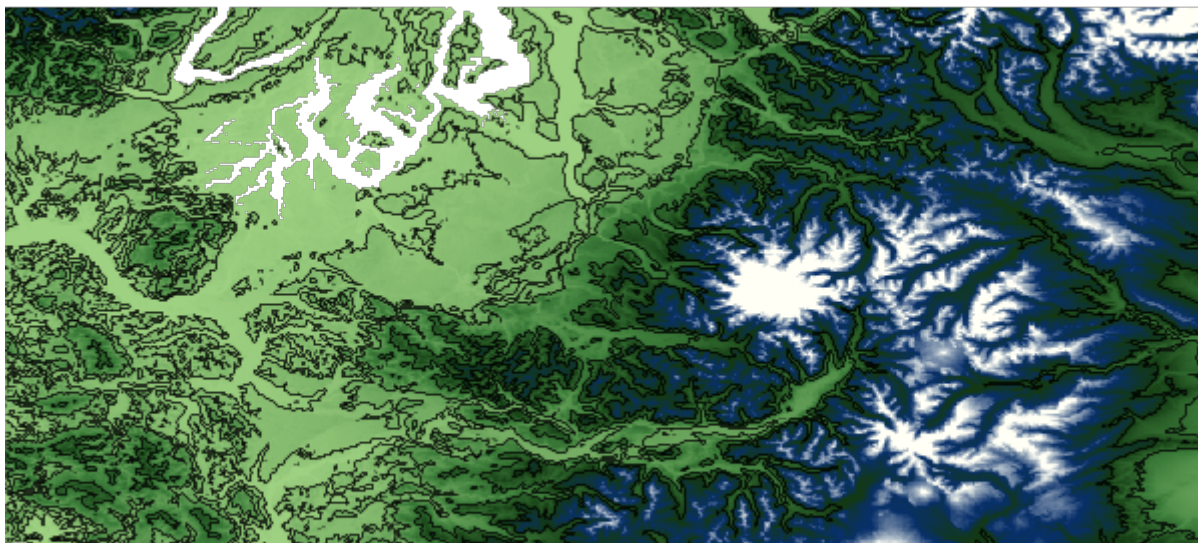
```
geo-shell> map open --name map  
Map map opened!
```

```
geo-shell> map add raster --name map --raster pc  
Added pc layer to map map
```

```
geo-shell> map add layer --name map --layer contours  
Added contours layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_contours.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_contours.png!
```

```
geo-shell> map close --name map  
Map map closed!
```



Crop

Crop a Raster.

```
geo-shell> raster crop --name earth --output-format earthCropped --output-name earthCropped
--geometry "-160.927734,6.751896,-34.716797,57.279043"
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
geometry	The geometry	true		

```
geo-shell> format open --name earth --input src/test/resources/earth.tif
Format earth opened!
```

```
geo-shell> raster open --format earth --raster earth --name earth
Opened Format earth Raster earth as earth
```

```
geo-shell> format open --name earthCropped --input examples/earthCropped.tif
Format earthCropped opened!
```

```
geo-shell> raster crop --name earth --output-format earthCropped --output-name earthCropped
--geometry "-160.927734,6.751896,-34.716797,57.279043"
```

Raster earth cropped to earthCropped!

```
geo-shell> map open --name map  
Map map opened!
```

```
geo-shell> map add raster --name map --raster earthCropped  
Added earthCropped layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_crop.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_crop.png!
```

```
geo-shell> map close --name map  
Map map closed!
```



Mosaic

Mosaic two Rasters together

```
geo-shell> raster mosaic --name1 alki2 --name2 alki3 --output-format mosaic --output-name mosaic
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name1	The Raster name	true		
name2	The Raster name	true		
output-format	The output Format Workspace	true		

output-name	The output Raster name	false		
-------------	------------------------	-------	--	--

geo-shell> **format open** --input examples/alki2.tif --name alki2
Format alki2 opened!

geo-shell> **raster open** --format alki2 --raster alki2 --name alki2
Opened Format alki2 Raster alki2 as alki2

geo-shell> **format open** --input examples/alki3.tif --name alki3
Format alki3 opened!

geo-shell> **raster open** --format alki3 --raster alki3 --name alki3
Opened Format alki3 Raster alki3 as alki3

geo-shell> **format open** --input examples/mosaic.tif --name mosaic
Format mosaic opened!

geo-shell> **raster mosaic** --name1 alki2 --name2 alki3 --output-format mosaic --output-name mosaic
Mosaic alki2 and alki3 to create mosaic!

geo-shell> **map open** --name map
Map map opened!

geo-shell> **map add raster** --name map --raster mosaic
Added mosaic layer to map map

geo-shell> **map draw** --name map --file examples/raster_mosaic.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_mosaic.png!

geo-shell> **map close** --name map
Map map closed!



Reclassify

Reclassify a Raster.

```
geo-shell> raster reclassify --name pc --output-format pcReclass --output-name pcReclass --ranges
"0-0=1,0-50=2,50-200=3,200-1000=4,1000-1500=5,1500-4000=6"
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
ranges	The comma delimited reclassification ranges (from-to=value)	true		
band	The Raster band to contour	false	0	0
nodata	The NODATA value	false	0	0

```
geo-shell> format open --name pc --input src/test/resources/pc.tif
```

Format pc opened!

```
geo-shell> raster open --format pc --raster pc --name pc  
Opened Format pc Raster pc as pc
```

```
geo-shell> format open --name pcReclass --input examples/pcReclass.tif  
Format pcReclass opened!
```

```
geo-shell> raster reclassify --name pc --output-format pcReclass --output-name pcReclass --ranges  
"0-0=1,0-50=2,50-200=3,200-1000=4,1000-1500=5,1500-4000=6"  
Raster pc reclassified to pcReclass!
```

```
geo-shell> style raster colormap --raster pcReclass --values  
"1=#9fd182,2=#3e7f3c,3=#133912,4=#08306b,5=#FFF8DC,6=#ffffff" --file examples/pcReclass.sld  
Colormap Raster Style for pcReclass written to /home/runner/work/geo-shell/geo-shell/examples/pcReclass.sld!
```

```
geo-shell> raster style set --name pcReclass --style examples/pcReclass.sld  
Style /home/runner/work/geo-shell/geo-shell/examples/pcReclass.sld set on pcReclass
```

```
geo-shell> map open --name map  
Map map opened!
```

```
geo-shell> map add raster --name map --raster pcReclass  
Added pcReclass layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_reclassify.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_reclassify.png!
```

```
geo-shell> map close --name map  
Map map closed!
```



Reproject

Project a Raster.

```
geo-shell> raster reproject --name earthCropped --output-format earth3857 --output-name earth3857 --projection "EPSG:3857"
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
projection	The projection	true		

```
geo-shell> format open --name earth --input src/test/resources/earth.tif  
Format earth opened!
```

```
geo-shell> raster open --format earth --raster earth --name earth  
Opened Format earth Raster earth as earth
```

```
geo-shell> format open --name earthCropped --input examples/earthCropped.tif  
Format earthCropped opened!
```

```
geo-shell> raster crop --name earth --output-format earthCropped --output-name earthCropped  
--geometry "-180.0,-85.06,180.0,85.06"
```


Raster earth cropped to earthCropped!

```
geo-shell> format open --name earth3857 --input examples/earth3857.tif
Format earth3857 opened!
```

```
geo-shell> raster reproject --name earthCropped --output-format earth3857 --output-name
earth3857 --projection "EPSG:3857"
Raster earthCropped reprojected to earth3857 as EPSG:3857!
```

```
geo-shell> map open --name map
Map map opened!
```

```
geo-shell> map add raster --name map --raster earth3857
Added earth3857 layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_reproject.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_reproject.png!
```

```
geo-shell> map close --name map
Map map closed!
```



Scale

Scale a Raster.

```
geo-shell> raster scale --name pc --output-format pcScaled --output-name pcScaled --x 0.5 --y 0.5
```

Name	Description	Mandatory	Specified Default	Unspecified Default
------	-------------	-----------	-------------------	---------------------

name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
x	The scale factor along the x axis	true		
y	The scale factor along the y axis	true		
x-trans	The x translation	false	0	0
y-trans	The y translation	false	0	0
interpolation	The interpolation method (bicubic, bicubic2, bilinear, nearest)	false	nearest	nearest

```
geo-shell> format open --name pc --input src/test/resources/pc.tif
Format pc opened!
```

```
geo-shell> raster open --format pc --raster pc --name pc
Opened Format pc Raster pc as pc
```

```
geo-shell> format open --name pcScaled --input examples/pcScaled.tif
Format pcScaled opened!
```

```
geo-shell> raster scale --name pc --output-format pcScaled --output-name pcScaled --x 0.5 --y 0.5
Raster pc scaled to pcScaled!
```

```
geo-shell> style raster colormap --raster pc --values
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffff5" --file examples/pcScaled.sld
Colormap Raster Style for pc written to /home/runner/work/geo-shell/geo-shell/examples/pcScaled.sld!
```

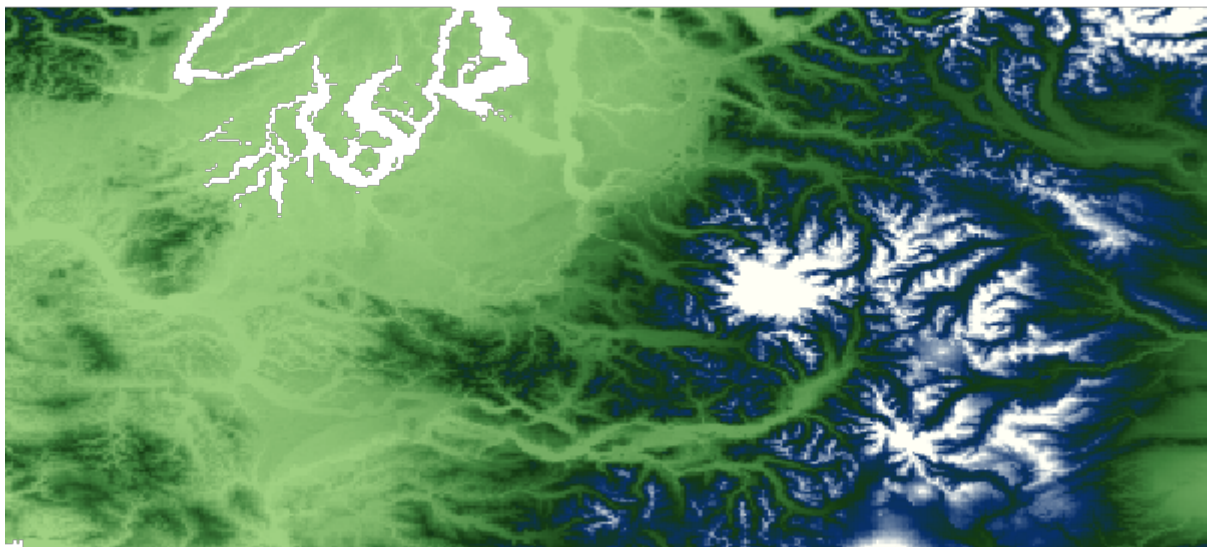
```
geo-shell> raster style set --name pcScaled --style examples/pcScaled.sld
Style /home/runner/work/geo-shell/geo-shell/examples/pcScaled.sld set on pcScaled
```

```
geo-shell> map open --name map
Map map opened!
```

```
geo-shell> map add raster --name map --raster pcScaled
Added pcScaled layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_scale.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_scale.png!
```

```
geo-shell> map close --name map
Map map closed!
```



Shaded Relief

Create a shaded relief raster

```
geo-shell> raster shadedrelief --name pc --output-format pcShaded --output-name pcShaded --scale 1.0 --altitude 25 --azimuth 260
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		
scale	The scale	true		
altitude	The altitude	true		
azimuth	The azimuth	true		
resx	The x resolution	false	0.5	0.5
resy	The y resolution	false	0.5	0.5
zetafactory	The zeta factory	false	1.0	1.0
algorithm	The x resolution	false	DEFAULT	DEFAULT

```
geo-shell> format open --name pc --input src/test/resources/pc.tif
Format pc opened!
```

```
geo-shell> raster open --format pc --raster pc --name pc  
Opened Format pc Raster pc as pc
```

```
geo-shell> format open --name pcShaded --input examples/pcShaded.tif  
Format pcShaded opened!
```

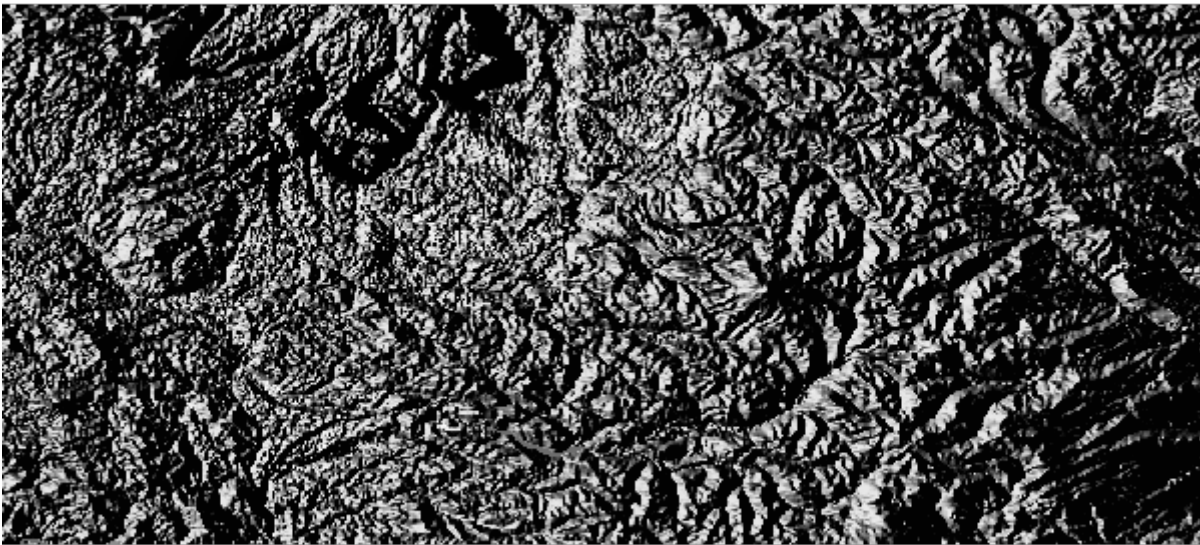
```
geo-shell> raster shadedrelief --name pc --output-format pcShaded --output-name pcShaded --scale  
1.0 --altitude 25 --azimuth 260  
Create shaded relief pcShaded from pc!
```

```
geo-shell> map open --name map  
Map map opened!
```

```
geo-shell> map add raster --name map --raster pcShaded  
Added pcShaded layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_shadedrelief.png  
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_shadedrelief.png!
```

```
geo-shell> map close --name map  
Map map closed!
```



Stylize

Create a new Raster by baking the style into an existing Raster

```
geo-shell> raster stylize --name pc --output-format pcStyled --output-name pcStyled
```

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-format	The output Format Workspace	true		
output-name	The output Raster name	false		

geo-shell> **format open** --name pc --input src/test/resources/pc.tif
Format pc opened!

geo-shell> **raster open** --format pc --raster pc --name pc
Opened Format pc Raster pc as pc

geo-shell> **style raster colormap** --raster pc --values
"25=#9fd182,470=#3e7f3c,920=#133912,1370=#08306b,1820=#ffff5" --file examples/pc.sld
Colormap Raster Style for pc written to /home/runner/work/geo-shell/geo-shell/examples/pc.sld!

geo-shell> **raster style set** --name pc --style examples/pc.sld
Style /home/runner/work/geo-shell/geo-shell/examples/pc.sld set on pc

geo-shell> **format open** --name pcStyled --input examples/pcStyled.tif
Format pcStyled opened!

geo-shell> **raster stylize** --name pc --output-format pcStyled --output-name pcStyled
Stylized pc to create pcStyled!

geo-shell> **map open** --name map
Map map opened!

geo-shell> **map add raster** --name map --raster pcStyled
Added pcStyled layer to map map

geo-shell> **map draw** --name map --file examples/raster_stylize.png
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_stylize.png!

geo-shell> **map close** --name map
Map map closed!



Polygon

Convert a raster in a polygon

geo-shell> **raster polygon** --name high --output-workspace layers --output-name grid

Name	Description	Mandatory	Specified Default	Unspecified Default
name	The Raster name	true		
output-workspace	The output Layer Workspace	true		
output-name	The output Layer name	true		
band	The band	false	0	0
inside-edges	Whether to include inside edges	false	true	true
roi	The region of interest	false		
nodata	The NODATA value	false	0	0

ranges	The comma delimited reclassification ranges (min,minIncluded, max,maxIncluded)	false		
--------	--	-------	--	--

```
geo-shell> format open --name high --input src/test/resources/high.tif
Format high opened!
```

```
geo-shell> raster open --format high --raster high --name high
Opened Format high Raster high as high
```

```
geo-shell> workspace open --name layers --params memory
Workspace layers opened!
```

```
geo-shell> raster polygon --name high --output-workspace layers --output-name grid
Done converting Raster high to a Polygon Layer grid!
```

```
geo-shell> style raster palette colormap --min 1 --max 50 --palette MutedTerrain --number 20 --file
examples/high.sld
Colormap Palette Raster Style written to /home/runner/work/geo-shell/geo-shell/examples/high.sld!
```

```
geo-shell> raster style set --name high --style examples/high.sld
Style /home/runner/work/geo-shell/geo-shell/examples/high.sld set on high
```

```
geo-shell> style create --params "stroke=black stroke-width=2 label=value label-size=12" --file
examples/grid.sld
Style stroke=black stroke-width=2 label=value label-size=12 written to /home/runner/work/geo-shell/geo-shell/examples/grid.sld!
```

```
geo-shell> layer style set --name grid --style examples/grid.sld
Style /home/runner/work/geo-shell/geo-shell/examples/grid.sld set on grid
```

```
geo-shell> map open --name map
Map map opened!
```

```
geo-shell> map add raster --name map --raster high
Added high layer to map map
```

```
geo-shell> map add layer --name map --layer grid
Added grid layer to map map
```

```
geo-shell> map draw --name map --file examples/raster_polygon.png --bounds "-180,-
90,180,90,EPSG:4326"
Done drawing /home/runner/work/geo-shell/geo-shell/examples/raster_polygon.png!
```

```
geo-shell> map close --name map
Map map closed!
```

17.0	18.0	19.0	20.0
13.0	14.0	15.0	16.0
9.0	10.0	11.0	12.0
5.0	6.0	7.0	8.0