Problem #0.21

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Contents

part a

```
z = 1 + 1j;
w = -1 + 1j;
v = -1 - 1j;
u = 1 - 1j;


compass(z, 'r')
hold on
compass(w, 'g')
compass(v, 'b')
compass(u, 'y')
title('Compass plot of vectors z, w, v, u');
hold off
```

part b

```
summed = z + w + v + u
```

part c

```
ratio_zw = z/w
ratio_wv = w/v
ratio_uz = u/z
ratio_uw = u/w
```

part d

```
y = 10^-16*z

figure();
compass(y)
title('Compass plot of vector y = 10e-16z');

mag_y = norm(y)
```

```
summed =

    0
```

```
ratio_zw =

   0.0000 - 1.0000i


ratio_wv =

   0.0000 - 1.0000i


ratio_uz =

   0.0000 - 1.0000i


ratio_uw =

    -1


y =

   1.0000e-16 + 1.0000e-16i


mag_y =

   1.4142e-16
```
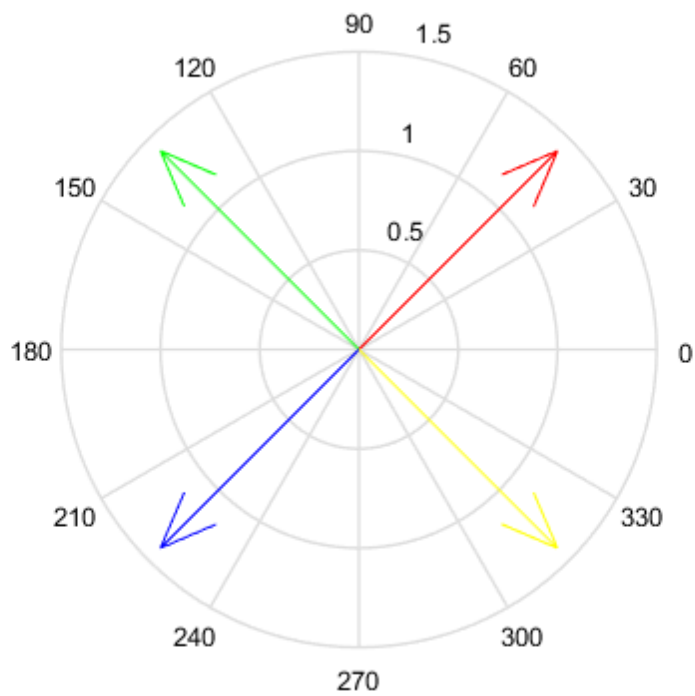
Compass plot of vectors z, w, v, u

Compass plot of vector y = 10e-16z