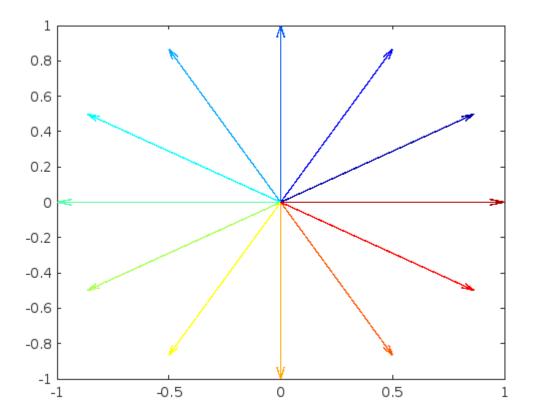
```
x0 = [0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0];
y0 = [0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0];
x = [1 2 3 4 5 6 7 8 9 10 11 12];
y = [1 2 3 4 5 6 7 8 9 10 11 12];
clf
z = pi/4;
rotMat = [cos(z) - sin(z); sin(z) cos(z)];
reflx = [1 0 ; 0 -1];
reflY = [-1 \ 0 \ ; \ 0 \ 1];
scale = [10 0 ; 0 100];
colors1 = jet(12);
for i = 1:12
    x(1,i) = \cos(i*pi/6);
    y(1,i) = \sin(i*pi/6);
    quiver(x0(i), y0(i), x(i), y(i), 'off', 'Color', colors1(i, :), 'LineWidth',
1);
    hold on;
end
% UNCOMMENTING EACH SECTION BELOW TO GET A NEW PLOT
% clf
% for j = 1:12
%
응
      pt = [x(1,j) ; y(1,j)];
      pt = rotMat*pt;
응
%
      x(1,j) = pt(1,1);
왕
      y(1,j) = pt(2,1);
      quiver(x0(j), y0(j), x(j), y(j), off', 'Color', colors1(j, :),
'LineWidth', 1);
      hold on;
응
%
응
% end
% clf
% for j = 1:12
응
응
      pt = [x(1,j) ; y(1,j)];
      pt = reflX*pt;
      x(1,j) = pt(1,1);
```

```
y(1,j) = pt(2,1);
응
      quiver(x0(j), y0(j), x(j), y(j), off', 'Color', colors1(j, :),
응
'LineWidth', 1);
왕
      hold on;
응
%
% end
% clf
% for j = 1:12
%
      pt = [x(1,j) ; y(1,j)];
응
      pt = reflY*pt;
%
      x(1,j) = pt(1,1);
%
      y(1,j) = pt(2,1);
      quiver(x0(j), y0(j), x(j), y(j), off', 'Color', colors1(j, :),
'LineWidth', 1);
      hold on;
응
응
응
% end
% clf
% for j = 1:12
응
      pt = [x(1,j) ; y(1,j)];
%
      pt = scale*pt;
응
      x(1,j) = pt(1,1);
응
      y(1,j) = pt(2,1);
%
      quiver(x0(j), y0(j), x(j), y(j), 'off', 'Color', colors1(j, :),
'LineWidth', 1);
%
      hold on;
응
% end
% QUESTION 3
% AB ~= BA
% clf
% for j = 1:12
%
응
      pt = [x(1,j) ; y(1,j)];
%
      product = scale*rotMat;
      pt = product*pt;
```

```
x(1,j) = pt(1,1);
응
      y(1,j) = pt(2,1);
응
      quiver(x0(j), y0(j), x(j), y(j), 'off', 'Color', colors1(j, :),
'LineWidth', 1);
      hold on;
응
응
% end
% clf
% for j = 1:12
응
      pt = [x(1,j) ; y(1,j)];
응
      product = rotMat*scale;
왕
      pt = product*pt;
%
      x(1,j) = pt(1,1);
왕
      y(1,j) = pt(2,1);
      quiver(x0(j), y0(j), x(j), y(j), 'off', 'Color', colors1(j, :),
'LineWidth', 1);
      hold on;
응
응
% end
% AB = BA
% clf
% for j = 1:12
왕
      pt = [x(1,j) ; y(1,j)];
응
      product = reflY*reflX;
%
      pt = product*pt;
      x(1,j) = pt(1,1);
왕
      y(1,j) = pt(2,1);
      quiver(x0(j), y0(j), x(j), y(j), 'off', 'Color', colors1(j, :),
'LineWidth', 1);
응
      hold on;
응
응
% end
% clf
% for j = 1:12
왕
%
      pt = [x(1,j) ; y(1,j)];
응
      product = reflX*reflY;
응
      pt = product*pt;
      x(1,j) = pt(1,1);
응
응
      y(1,j) = pt(2,1);
```

```
% quiver(x0(j), y0(j), x(j), y(j), 'off', 'Color', colors1(j, :),
'LineWidth', 1);
% hold on;
%
% end
```



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