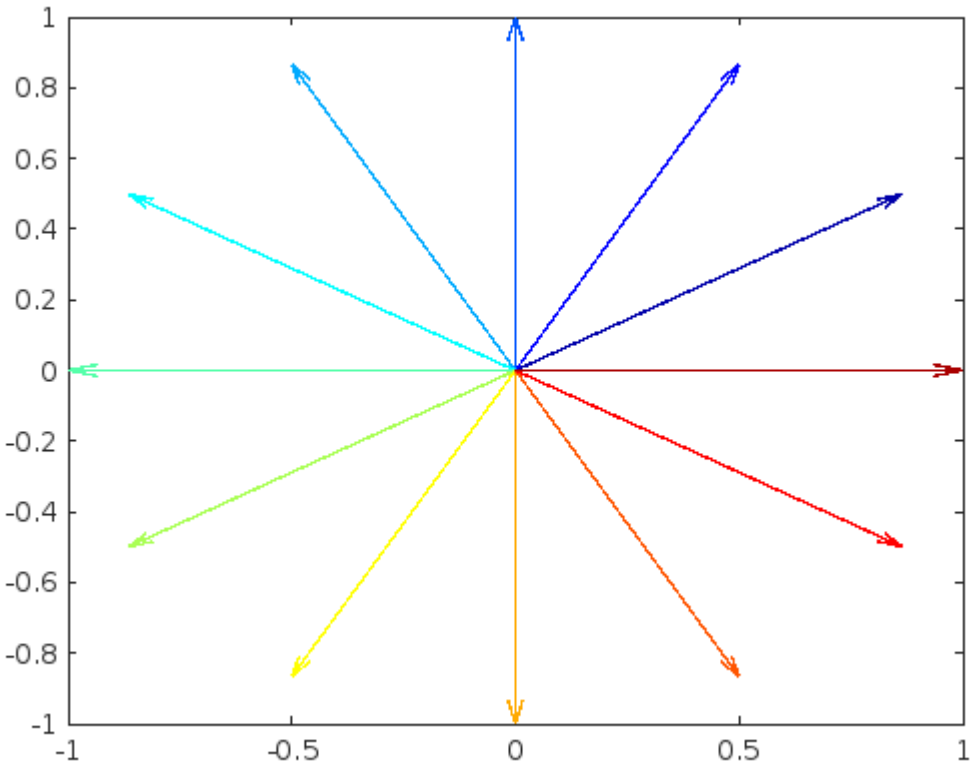
```
x0 = [0 0 0 0 0 0 0 0 0 0 0 0];
y0 = [0 0 0 0 0 0 0 0 0 0 0 0];
x = [1 2 3 4 5 6 7 8 9 10 11 12];
y = [1 2 3 4 5 6 7 8 9 10 11 12];

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
%
%     pt = [x(1,j) ; y(1,j)];
%     pt  = rotMat*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;
%
%
% end

% clf
% for j = 1:12
%
%     pt = [x(1,j) ; y(1,j)];
%     pt  = reflX*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;
%
%
% end


% clf
% for j = 1:12
%
%     pt = [x(1,j) ; y(1,j)];
%     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;
%
%
% end

% clf
% for j = 1:12
%
%     pt = [x(1,j) ; y(1,j)];
%     pt  = scale*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;
%
%
% end


% QUESTION 3


% AB ~= BA



% clf
% for j = 1:12
%
%     pt = [x(1,j) ; y(1,j)];
%     product = scale*rotMat;
%     pt  = product*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;
%
%
% end

% clf
% for j = 1:12
%
%     pt = [x(1,j) ; y(1,j)];
%     product = rotMat*scale;
%     pt  = product*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;
%
%
% end


% AB = BA


% clf
% for j = 1:12
%
%     pt = [x(1,j) ; y(1,j)];
%     product = reflY*reflX;
%     pt  = product*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;
%
%
% end

% clf
% for j = 1:12
%
%     pt = [x(1,j) ; y(1,j)];
%     product = reflX*reflY;
%     pt  = product*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;
%
%
% end
```



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