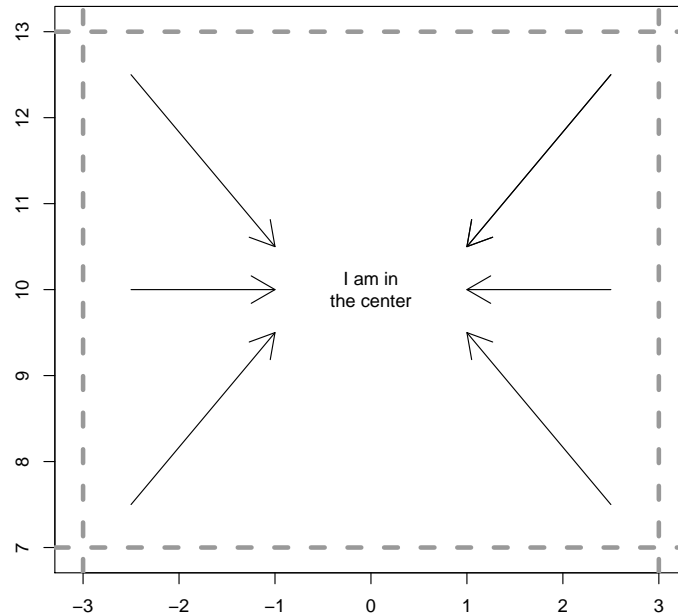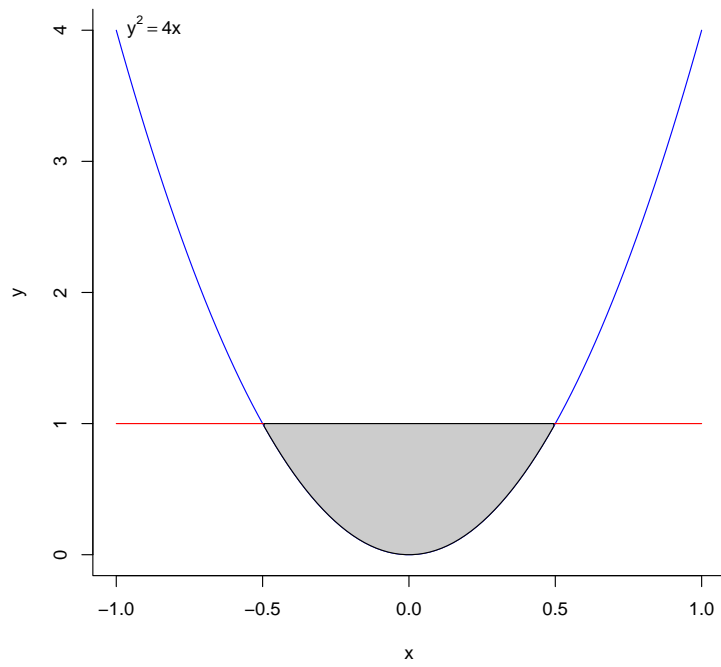# Problem set - 4

1. Plot the graph of $\sin x$ and $\cos x$ in a single figure within the x-range $[-\pi, \pi]$.

2. As closely as you can, re-create the following plot:

3. With the following data, create a plot of weight on the x-axis and height on the y-axis. Use different point characters or colors to distinguish between males and females and provide a matching legend. Label the axes and give the plot a title.

Weight (kg)	Height (cm)	Sex
55	161	female
85	185	male
75	174	male
42	154	female
93	188	male
63	178	male
58	170	female
75	167	male
89	181	male
67	178	female

4. As closely as you can, re-create the following:

5. Draw the circles $x^2 + y^2 = 1$ and $x^2 + y^2 = 0.25$. Then fill the annular region between them with any colour. You are free to use any packages. Try to re-create the following: