Chapter 8 Test

1) The graph of $y = x^3 - 3x^2$ indicates that this relation is a function because it passes the vertical line test.

3) Domain:  x

Range:  y

5) No. The graph fails to pass the vertical line test.

7)

a) (0,0) is the only x-intercept and y-intercept.
b) No

9)

a) $c(t(b)) = c(90b) = \dfrac{(90b)}{2} = 45b$

b) $1\frac{3}{4} = \frac{7}{4}$ $\qquad c(t(\frac{7}{4})) = 45(\frac{7}{4}) = 78.75$ cups

11) The graph of $g(x) = 5\sqrt{x-3}$ is the same as that of $f(x) = \sqrt{x}$ shifted to the right 3 units and stretched away from the x-axis (by a scale factor of 5).

13) $y = |x - 1| - 2$