2.4

(5) $f(x) = \frac{\sqrt{x+1}}{\sqrt{x-2}}$ $g(x) = \sqrt{\frac{x+1}{x-2}}$

$0 < x+1$ and $x-2$ $0 < \frac{x+1}{x-2}$

$\{x \mid x > 2\}$ $\{x \mid x < -2$ and $x > 2\}$

Handout 8

(3) $\{x \mid -4 < x \leq -2$ and $-1 \leq x < 3\}$
$\{y \mid -3 < y < 4\}$

(8) No, because the output, domain and range have to be the same and $f(x)$ is undefined at 3 wher $g(x)$ isn't

(9) Yes, because if $x \neq 2$ and 6 the denominator gets cancled on and what remains is the same

(11) C because this is the only one wher it is undefined at $x = 1$

(12) (a) The height of a tree at 10 years old

(b) $50 = -0.0013t^3 + 0.137t^2 + 0.458t - 0.83$
$t = 25.3876, 37.8940$

(c) By looking at my calculator the domain and range would be $\{x|x \in \mathbb{R}\}\{y|y \in \mathbb{R}\}$ but realistically it would be $\{x|0 \leq x \leq 48(365)\}$ and $\{y|0 \leq y \leq 53.776\}$ because time can't be negative and height can't be negative.

(14) $\{x|0 \leq x \leq 4\}$