Chapter 1 Summary:

convert <u>from</u> other base <u>to</u> decimal

expansion method

$$132_4 = 1 \times 4^2 + 3 \times 4^1 + 2 \times 4^0$$
$$= 30_{10}$$

convert <u>from</u> decimal <u>to</u> other base

repeated division

$30 \rightarrow$ base 4

	Q	R
$30 \div 4$	7	2
$7 \div 4$	1	3
$1 \div 4$	0	1

convert <u>between</u> binary $\Leftrightarrow$ octal $\Leftrightarrow$ hexadecimal
(bases that are a power of 2)

$$37_8 = 011\ 111_2 = 11111_2 = 1F_{16}$$

note: it is important that you know
<u>when</u> to use each method!