CIS115 Numbering Test

Convert the following decimal numbers to binary:

1. 123_{10}

$123/2 = 61$ R1
$61/2 = 30$ R1
$30/2 = 15$ R0
$15/2 = 7$ R1
$7/2 = 3$ R1
$3/2 = 1$ R1
$1/2 = 0$ R1

$= 1111011_2$

2. 59_{10}

$59/2 = 29$ R1
$29/2 = 14$ R1
$14/2 = 7$ R0
$7/2 = 3$ R1
$3/2 = 1$ R1
$1/2 = 0$ R1

$= 111011_2$

3. 211_{10}

$211/2 = 105$ R1
$105/2 = 52$ R1
$52/2 = 26$ R0
$26/2 = 13$ R0
$13/2 = 6$ R1
$6/2 = 3$ R0
$3/2 = 1$ R1
$1/2 = 0$ R1

$= 11010011_2$

4. 99_{10}

$99/2 = 49$ R1
$49/2 = 24$ R1
$24/2 = 12$ R0
$12/2 = 6$ R0
$6/2 = 3$ R0
$3/2 = 1$ R1
$1/2 = 0$ R1

$= 1100011_2$