# Converting decimal to binary and vice versa

Convert the following decimal numbers to binary numbers:

35:

| $2^6$ | $2^5$ | $2^4$ | $2^3$ | $2^2$ | $2^1$ | $2^0$ |
|---|---|---|---|---|---|---|
| 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| | | | | | | |

80:

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |

99:

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |

190:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

Convert the following binary numbers to decimal numbers:

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 1 | 0 | 0 | 1 |

= [ ]

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 1 | 0 | 1 | 1 | 0 | 0 |

= [ ]

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 1 | 0 | 1 | 1 | 1 | 0 |

= [ ]

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 1 | 0 | 0 | 1 | 1 | 1 |

= [ ]

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 1 | 1 | 1 | 0 |

= [ ]

The formula for finding the highest number that can be stored in given bits is $2^N-1$.

What is the largest number that can be stored in 4 bits?

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