

# Binary to Decimal

This binary number... → **1 1 1 1 1 1 1 1** Equals this decimal number

$2^7$	$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
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$128 + 64 + 32 + 16 + 8 + 4 + 2 + 1 = 255$

This binary number... → **1 0 0 1 0 1 0 1** Equals this decimal number

$2^7$	$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
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$128 + 0 + 0 + 16 + 0 + 4 + 0 + 1 = 149$

Convert each binary number into a decimal number.

1. 1 1 0 0 1 0 0 1 = \_\_\_\_\_      9. 0 1 1 0 1 1 1 0 = \_\_\_\_\_

2. 0 1 0 0 0 1 1 1 = \_\_\_\_\_      10. 0 0 0 1 0 1 1 1 = \_\_\_\_\_

3. 1 0 0 0 0 1 1 0 = \_\_\_\_\_      11. 1 1 1 1 1 0 0 0 = \_\_\_\_\_

4. 0 0 0 1 0 0 0 1 = \_\_\_\_\_      12. 1 1 1 0 0 0 1 0 = \_\_\_\_\_

5. 1 0 0 0 1 0 0 0 = \_\_\_\_\_      13. 0 0 0 1 1 1 0 1 = \_\_\_\_\_

6. 0 0 1 1 1 1 1 0 = \_\_\_\_\_      14. 0 1 1 0 1 1 1 1 = \_\_\_\_\_

7. 0 1 0 1 0 1 0 1 = \_\_\_\_\_      15. 1 0 0 1 0 1 1 1 = \_\_\_\_\_

8. 1 0 1 0 1 0 1 0 = \_\_\_\_\_      16. 1 1 1 0 0 1 0 1 = \_\_\_\_\_

Convert the following to Binary:

17. 204 = \_\_\_\_\_      19. 196 = \_\_\_\_\_

18. 176 = \_\_\_\_\_      20. 250 = \_\_\_\_\_