

Exporting/Importing Jar files

To import a zip file select: File -> Import -> General -> Existing Projects into Workspace -> Select archive File

To export a zip file select Right click on your project -> Export -> General -> File System -> Select browse to indicate where you want it to export -> Finish

Base Conversion - Converting to Base 10

$$592 = (5 * 10^2) + (9 * 10^1) + (2 * 10^0) = 500 + 90 + 2$$

$$253_6 = (2 * 6^2) + (5 * 6^1) + (3 * 6^0)$$

$$= 72 + 30 + 3$$

$$= 105_{10} \text{ (105 in base 10)}$$

$$142_9 = (1 * 9^2) + (4 * 9^1) + (2 * 9^0)$$

$$= 81 + 36 + 2$$

$$= 119_{10} \text{ (119 in base 10)}$$

Base Conversion - Converting to Base 10

$$\begin{aligned}142_9 &= (1 * 9^2) + (4 * 9^1) + (2 * 9^0) \\ &= 81 + 36 + 2 \\ &= 119_{10} \text{ (119 in base 10)}\end{aligned}$$

$$\begin{aligned}137_3 &= (1 * 3^2) + (3 * 3^1) + (7 * 3^0) \\ &= 9 + 9 + 7 \\ &= 25_{10} \text{ (25 in base 10)}\end{aligned}$$

Base Conversion - Converting From Base 10

76₁₀ = 136₇ in base 7

76 divided by 7 gives you 10 remainder 6

10 divided by 7 gives you 1 remainder 3

1 divided by 7 gives you 0 remainder 1

Base Conversion - Converting From Base 10

$113_{10} = 423_5$ in base 5

113_{10} divided by 5 gives 22 remainder 3

22_{10} divided by 5 gives 4 remainder 2

4_{10} divided by 5 gives 0 remainder 4

Base Conversion - Converting From Base 10

$113_{10} = 161_8$ in base 8

113_{10} divided by 8 gives 14 remainder 1

14_{10} divided by 8 gives 1 remainder 6

1_{10} divided by 8 gives 0 remainder 1

$113_{10} = 71_{16}$ in base 16

113_{10} divided by 16 gives 7 remainder 1

7_{10} divided by 16 gives 0 remainder 7

Practice

1. Convert 0001 1010 1010 1110 from binary to base 16
2. Convert 41 from octal to base 2
3. Convert 1111 1000 from base 2 to decimal
4. Convert 0011 from base 2 to decimal
5. Convert 0110 0000 from base 2 to decimal
6. Convert 0100 from base 2 to base 10
7. Convert 76 from octal to base 2
8. Convert 4563 from hexadecimal to base 2
9. Convert 1111 1011 0111 1110 from base 2 to base 16
10. Convert 5 from octal to base 2

Answers: Online helper:

<https://www.rapidtables.com/convert/number/base-converter.html>

Correct answer: 1aae

Correct answer: 100 001

Correct answer: 248

Correct answer: 3

Correct answer: 96

Correct answer: 4

Correct answer: 111 110

Correct answer: 0100 0101 0110 0011

Correct answer: fb7e

Correct answer: 101