

Facts and Reminders

Roman Numerals

Roman numerals come from the Latin language and were used by the ancient Romans. They are still used in the prefaces of some books, on public buildings, and in various other places. Because the Romans lacked the concept of the empty space, the zero, these numerals can be difficult to add or subtract and require more symbols than decimal systems.

The Seven Basic Numerals

Seven capital letters stand for the basic symbols of the Roman number system.

Roman Numeral	Value
I	1
V	5
X	10
L	50
C	100
D	500
M	1000

Numerals 1 to 10			
I	1	VI	6
II	2	VII	7
III	3	VIII	8
IV	4	IX	9
V	5	X	10

Combining Roman Numerals

- If a smaller number (one of lesser value) is placed before a larger number, that smaller number is subtracted from the larger number.
 - IV Placing I before the V is 5 minus 1, or 4.
 - IX Placing I before the X is 10 minus 1, or 9.
- If a smaller number (one of lesser value) is placed after a larger number, that smaller number is added to the larger number.
 - VI Placing I after the V is 5 plus 1, or 6.
 - XII Placing II after the X is 10 plus 2, or 12.
- No more than three of any one letter are next to each other.
 - III 3 CCC 300 MMM 3,000
- A dash over a number multiplies the value by 1,000.
 - \overline{X} = 10,000 \overline{V} = 5,000

Zero Trouble

Basic Roman Numerals

Directions: Study the Facts and Reminders page for this unit. Write the present-day number equivalent to each Roman numeral.

1. I = _____
2. IV = _____
3. VI = _____
4. X = _____
5. III = _____
6. V = _____
7. VIII = _____
8. XII = _____
9. VII = _____
10. IX = _____
11. XV = _____
12. XIII = _____

Roman Numerals 11 to 20

XI	11	XV	15	XIX	19
XII	12	XVI	16	XX	20
XIII	13	XVII	17		
XIV	14	XVIII	18		

Directions: Using the chart above, write these numbers as Roman numerals.

13. 21 = _____
14. 22 = _____
15. 23 = _____
16. 24 = _____
17. 25 = _____
18. 26 = _____
19. 27 = _____
20. 28 = _____
21. 29 = _____

Directions: Write the value for each of these Roman numerals.

22. XXX = _____
23. XXVI = _____
24. XXXIII = _____
25. XXXV = _____
26. XXIX = _____
27. XXXVIII = _____
28. XXXIX = _____
29. XXXIV = _____
30. XXXVII = _____

Directions: Write these values as Roman numerals.

31. 45 = _____
32. 49 = _____
33. 48 = _____
34. 47 = _____
35. 16 = _____
36. 46 = _____
37. 27 = _____
38. 37 = _____
39. 29 = _____

40. Write your age in Roman numerals: _____
41. Write a friend's age in Roman numerals: _____
42. Write an older relative's age in Roman numerals: _____

Converting Roman Numerals

Seven Basic Symbols for Roman Numerals

I	1	L	50	M	1000
V	5	C	100		
X	10	D	500		

Directions: Study the Facts and Reminders page for this unit. Use the rules from the Facts and Reminders page and the symbols above to convert these numbers to Roman numerals.

1. 501 = _____ 2. 103 = _____ 3. 305 = _____

4. 55 = _____ 5. 80 = _____ 6. 83 = _____

7. 400 = _____ 8. 99 = _____ 9. 68 = _____

10. 200 = _____ 11. 101 = _____ 12. 75 = _____

13. 109 = _____ 14. 110 = _____ 15. 111 = _____

16. 115 = _____ 17. 125 = _____ 18. 210 = _____

19. 40 = _____ 20. 600 = _____ 21. 800 = _____

22. 333 = _____ 23. 553 = _____ 24. 901 = _____

Directions: Convert these Roman numerals to present-day numbers.

25. D = _____ 26. CCC = _____ 27. CV = _____

28. LVIII = _____ 29. CCXC = _____ 30. LXXX = _____

31. XL = _____ 32. XLV = _____ 33. CVC = _____

34. LIX = _____ 35. LXXXVIII = _____ 36. XC = _____

37. XLVIII = _____ 38. XLIX = _____ 39. XD = _____

Zero Trouble

Using Roman Numerals

Directions: Study the Facts and Reminders page for this unit. Convert these Roman numeral dates to present-day numerals.

1. MM = _____
2. MMI = _____
3. MMV = _____
4. MCM = _____
5. MDCCC = _____
6. MDCCCIII = _____
7. MCMXII = _____
8. MCML = _____
9. MCMLXXXIII = _____
10. MDC = _____
11. MDCCXVIII = _____
12. MCMXCVIII = _____

Directions: Convert these dates to Roman numerals.

13. 2000 = _____
14. 2001 = _____
15. 2010 = _____
16. 1900 = _____
17. 1960 = _____
18. 1800 = _____
19. 1910 = _____
20. 1940 = _____
21. 1881 = _____
22. 1654 = _____
23. 1492 = _____
24. 1588 = _____

Directions: Determine the value of each of these Roman numerals.

25. V = _____
26. X = _____
27. L = _____
28. C = _____
29. D = _____
30. M = _____
31. MM = _____
32. CCC = _____
33. MD = _____
34. MDCC = _____
35. MMMDCL = _____
36. MDCLXVI = _____

Directions: Write these answers in Roman numerals.

37. What is the sum of XXXVIII and XXV? _____
38. What is the sum of LXXXVI and XI? _____
39. What is the sum of XC and CX? _____
40. What is the sum of XXIII and XXVII? _____

Answer Key

10. terminating, 0.6105

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- 0.6666666
- 0.428571428571
- 0.44444444
- 0.2727272727
- 0.384615384615
- 0.83333333
- 0.714285714285
- 0.77777777
- 0.0909090909
- 0.5333333333

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- 1.7320508, 1.73
- 2.6457513, 2.65
- 3.3166247, 3.32
- 3.6055512, 3.61
- 4.1231056, 4.12
- 4.3588989, 4.36
- 4.7958315, 4.80
- 5.5677643, 5.57
- 0.3478260, 0.35
- 2.1428571, 2.14
- 0.4347826, 0.43
- 1.4615384, 1.46
- 1.2608695, 1.26
- 0.8947368, 0.89
- counting numbers pattern
- prime numbers pattern

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- isosceles right triangle
- equilateral triangle
- acute scalene triangle
- acute isosceles triangle
- right triangle
- obtuse isosceles triangle
- acute scalene triangle
- obtuse scalene triangle
- acute isosceles triangle
- obtuse scalene triangle

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- $x^\circ = 40^\circ$
- $y^\circ = 70^\circ$
- $z^\circ = 125^\circ$

4. $x^\circ = 90^\circ$

5. $x^\circ = 120^\circ$

6. $y^\circ = 80^\circ$

7. $z^\circ = 50^\circ$

8. $x^\circ = 40^\circ$

9. $y^\circ = 60^\circ$

10. $z^\circ = 110^\circ$

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1. $x^\circ = 60^\circ$

$y^\circ = 60^\circ$

$z^\circ = 60^\circ$

2. $x^\circ = 80^\circ$

$y^\circ = 50^\circ$

3. $z^\circ = 20^\circ$

4. $x^\circ = 30^\circ$

5. $x^\circ = 45^\circ$

$y^\circ = 90^\circ$

$z^\circ = 45^\circ$

6. $a^\circ = 65^\circ$

$b^\circ = 90^\circ$

7. $z^\circ = 25^\circ$

8. $x^\circ = 70^\circ$

$y^\circ = 40^\circ$

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- | | |
|-----------|-----------|
| 1. 15 cm | 5. 21 m |
| 2. 22 m | 6. 47 in. |
| 3. 23 yd. | 7. 12 m |
| 4. 32 ft. | 8. 19 yd. |

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- 10 cm^2
- 20 m^2
- 7 m^2
- 18 in.^2
- 22.8 m^2
- 99.5 cm^2
- 96 yd.^2
- 132 ft.^2

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- 12.8 m^2
- 20.16 m^2
- $1,181.6 \text{ m}^2$
- $30,747 \text{ m}^2$
- 71.4 m^2
- $14,500 \text{ mm}^2$
- 216 mm^2
- 392 ft.^2

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- 1
- 4
- 6
- 10

5. 3

6. 5

7. 8

8. 12

9. 7

10. 9

11. 15

12. 13

13. XXI

14. XXII

15. XXIII

16. XXIV

17. XXV

18. XXVI

19. XXVII

20. XXVIII

21. XXIX

22. 30

23. 26

24. 33

25. 35

26. 29

27. 38

28. 39

29. 34

30. 37

31. XLV

32. XLIX

33. XLVIII

34. XLVII

35. XVI

36. XLVI

37. XXVII

38. XXXVII

39. XXIX

40. Answers will vary.

41. Answers will vary.

42. Answers will vary.

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1. DI

2. CIII

3. CCCV

4. LV

5. LXXX

6. LXXXIII

7. CD

8. IC

9. LXVIII

10. CC

11. CI

12. LXXV

13. CIX

14. CX

15. CXI

16. CXV

17. CXXV

18. CCX

19. XL

20. DC

21. DCCC

22. CCCXXXIII

23. DLIII

24. CMI

25. 500

26. 300

27. 105

28. 58

29. 290

30. 80

31. 40

32. 45

33. 195

34. 59

35. 88

36. 90

37. 48

38. 49

39. 490

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- 2000
- 2001
- 2005
- 1900
- 1800
- 1803
- 1912
- 1950
- 1983
- 1600
- 1718
- 1998
- MM
- MMI
- MMX
- MCM
- MCMLX
- MDCCC
- MCMX
- MCMXL
- MDCCCLXXXI
- MDCLIV
- MCDXCII
- MDLXXXVIII
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