

Convert the numeral to a numeral in base 10.

5) 231_7

Convert the base 10 numeral to a numeral in the base indicated.

6) 2874 to base 8

Add in the indicated base.

7)

$$\begin{array}{r} 44_5 \\ 11_5 \\ \hline \end{array}$$

Subtract in the indicated base.

8)

$$\begin{array}{r} 301_4 \\ 102_4 \\ \hline \end{array}$$

Multiply in the indicated base.

9)

$$\begin{array}{r} 637 \\ \times 27 \\ \hline \end{array}$$

Decide whether the given set of numbers is a group under the given operation.

10) Natural numbers; subtraction

Decide whether the given set of numbers is a commutative group under the given operation.

11) Rational numbers; multiplication

Determine the sum or difference in clock 12 arithmetic.

12) $(2 + 3) + 8$

Decide which of the 5 properties of a commutative group (closure, identity, inverse, associative, commutative) hold for the given system.

13)

\otimes	2	6	12	16
2	6	12	16	2
6	12	16	2	6
12	16	2	6	12
16	2	16	12	6

Solve the problem.

14) If August is your starting month, what month will it be 5 years and 8 months from August?

Perform the modular arithmetic operation.

15) $45 - 23 \pmod{5}$

Find all replacements (less than the modulus) for the question mark that make the statement true.

16) $3 \cdot 8 \equiv ? \pmod{8}$