PRIME FACTORIZATION

Write the following numbers as a product of primes using exponents.

Remember that 1 is not a prime number. Write PRIME for any number that is already prime.

24 $2\overline{)24}$ $2\overline{)12}$ $2\overline{)6}$ 3 $2 \cdot 2 \cdot 2 \cdot 3 = 2^3 \cdot 3$	54 $2\overline{)54}$ $3\overline{)27}$ $3\overline{)9}$ 3 $2 \cdot 3 \cdot 3 \cdot 3 = 2 \cdot 3^3$	100 $2\overline{)100}$ $2\overline{)50}$ $5\overline{)25}$ 5 $2 \cdot 2 \cdot 5 \cdot 5 = 2^2 \cdot 5^2$
63 $3\overline{)63}$ $3\overline{)21}$ 7 $3 \cdot 3 \cdot 7 = 3^2 \cdot 7$	37 37 PRIME	27 $3\overline{)27}$ $3\overline{)9}$ 3 $3 \cdot 3 \cdot 3 = 3^3$
144 $2\overline{)144}$ $2\overline{)72}$ $2\overline{)36}$ $2\overline{)18}$ $3\overline{)9}$ 3 $2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 = 2^4 \cdot 3^2$	231 $3\overline{)231}$ $7\overline{)77}$ 11 $3 \cdot 7 \cdot 11$	221 $13\overline{)221}$ 17 $13 \cdot 17$

Note: Only one of these numbers is prime. If you marked more than one of these numbers as prime, make certain you go back and systematically look for any factors of the number. (See the Listing Factors section of this unit for more help.)