



Math worksheet on 'Prime Factorization as Exponents - 4 Factors (Level 3)'. Part of a broader unit on 'Factoring and Primes - Advanced'

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1 Show the prime factorization of this number as exponents

| | | |
|-----------------------------|-----------------------------------|---------------------------|
| a $2^3 \cdot 7^2$ | b $2^3 \cdot 3 \cdot 7$ | c 2^3 |
| d $2^3 \cdot 7$ | e $2^2 \cdot 14$ | f $2^4 \cdot 7$ |

56

2 Show the prime factorization of this number as exponents

| | |
|--------------------------------------|-------------------------------------|
| a $2^2 \cdot 3^2 \cdot 11$ | b $2^2 \cdot 3^2 \cdot 5$ |
| c $2^2 \cdot 3^2$ | d $2^2 \cdot 3^2 \cdot 7$ |
| e $2^2 \cdot 9$ | f $2^3 \cdot 3^2$ |

36

3 Show the prime factorization of this number as exponents

| | |
|----------------------------------|--------------------------------------|
| a $2^2 \cdot 5^2$ | b $2 \cdot 5^2$ |
| c $2 \cdot 10 \cdot 5$ | d $2^2 \cdot 25$ |
| e $2^2 \cdot 5^3$ | f $2^2 \cdot 5^2 \cdot 13$ |

100

4 Show the prime factorization of this number as exponents

| | |
|-----------------------------------|---|
| a $2 \cdot 3^2 \cdot 5$ | b $2 \cdot 3 \cdot 5$ |
| c $2 \cdot 3^2$ | d $2^2 \cdot 3^2 \cdot 5$ |
| e $3^2 \cdot 5$ | f $2 \cdot 3^2 \cdot 5 \cdot 7$ |

90

5 Show the prime factorization of this number as exponents

| | |
|--|---|
| a $2 \cdot 3 \cdot 21$ | b $2 \cdot 3^2 \cdot 5 \cdot 7$ |
| c $2 \cdot 3^2 \cdot 7 \cdot 11$ | d $2 \cdot 3^2$ |
| e $2^2 \cdot 3^2 \cdot 7$ | f $2 \cdot 3^2 \cdot 7$ |

126

6 Show the prime factorization of this number as exponents

| | |
|------------------------------------|------------------------------|
| a $2^2 \cdot 22$ | b $2^3 \cdot 11^2$ |
| c $2^3 \cdot 11$ | d $2^4 \cdot 11$ |
| e $2^3 \cdot 7 \cdot 11$ | f $2^2 \cdot 11$ |

88

7 Show the prime factorization of this number as exponents

| | |
|------------------------------------|-----------------------------------|
| a $2^2 \cdot 10$ | b $2^3 \cdot 5$ |
| c $2^4 \cdot 5$ | d $2^3 \cdot 5^2$ |
| e $2^3 \cdot 5 \cdot 11$ | f $2^3 \cdot 5 \cdot 7$ |

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