HCF and LCM from Prime Factorisation

Given that:

$A = 2^3 \times 5^4$ $B = 2^4 \times 3^3 \times 7$

$C = 2^2 \times 3 \times 5^3$ $D = 2 \times 3^5 \times 5$

$E = 3^2 \times 5 \times 7^3$ $F = 2^2 \times 7^3 \times 11$

$G = 2^4 \times 3 \times 5^2 \times 13$

Giving your answers as a product of prime factors, find the highest common factor of:

(a) A and D (b) B and C

(c) D and E (d) C and G

Giving your answers as a product of prime factors, find the lowest common multiple of:

(a) A and C (b) C and D

(c) B and F (d) E and G

Giving your answers as a product of prime factors:

(a) Find the HCF of A, C and D

(b) Find the HCF of C, E and G

(c) Find the LCM of A, C and D

(d) Find the LCM of C, D and G

Giving your answers as a product of prime factors:

(a) Find the HCF of 8A and B

(b) Find the HCF of 5B and E

(c) Find the LCM of C and 10D

(d) Find the LCM of 8D and G

$H = 2^x \times 5^y \times 7^2$

Given that the HCF of H and F is 98 and the LCM of H and F is $2^2 \times 5^3 \times 7^3 \times 11$, find the values of x and y.

HCF and LCM from Prime Factorisation

Given that:

$A = 2^3 \times 5^4$ $B = 2^4 \times 3^3 \times 7$

$C = 2^2 \times 3 \times 5^3$ $D = 2 \times 3^5 \times 5$

$E = 3^2 \times 5 \times 7^3$ $F = 2^2 \times 7^3 \times 11$

$G = 2^4 \times 3 \times 5^2 \times 13$

Giving your answers as a product of prime factors, find the highest common factor of:

(a) A and D (b) B and C

(c) D and E (d) C and G

Giving your answers as a product of prime factors, find the lowest common multiple of:

(a) A and C (b) C and D

(c) B and F (d) E and G

Giving your answers as a product of prime factors:

(a) Find the HCF of A, C and D

(b) Find the HCF of C, E and G

(c) Find the LCM of A, C and D

(d) Find the LCM of C, D and G

Giving your answers as a product of prime factors:

(a) Find the HCF of 8A and B

(b) Find the HCF of 5B and E

(c) Find the LCM of C and 10D

(d) Find the LCM of 8D and G

$H = 2^x \times 5^y \times 7^2$

Given that the HCF of H and F is 98 and the LCM of H and F is $2^2 \times 5^3 \times 7^3 \times 11$, find the values of x and y.