Prime Factor Decomposition

Write as a product of its prime factors.

(a) 40   (b) 36   (c) 70

(d) 126   (e) 200   (f) 224

(g) 420   (h) 825

Using factor trees and Venn diagrams, find the HCF and LCM of these pairs of numbers.

(a) 28 and 42   (b) 40 and 56

(c) 54 and 90   (d) 96 and 120

(a) In prime factor form $1250 = 2 \times 5^4$ and $525 = 3 \times 5^2 \times 7$. Find the HCF and LCM of 1250 and 525.

(b) $A = 2^3 \times 3^2 \times 5^4$ and $B = 3^5 \times 5 \times 7^3$. Find the HCF of A and B.

(a) The HCF of two numbers is 5. The LCM of the same two numbers is 150. One of the numbers is 10. What is the other number?

(b) The HCF of 12 and x is 4. The LCM of 12 and x is 120. What is the value of x?

(c) The HCF of 90 and x is 6. The LCM of 90 and x is 270. What is the value of x?

Find the LCM and HCF of

(a) 18, 48 and 270

(b) 165, 285 and 480

Trams leave for Bury every 14 minutes, for Rochdale every 20 minutes and for Bolton every 24 minutes. If trains leave for all three destinations at 9am, when is the next time trains will leave for all three destinations at the same time?