Factors

1. List all the factor pairs of the following numbers:

   a) 6   **b)** 9   **c)** 10   **d)** 15   **e)** 18
   f) 19   **g)** 20   **h)** 25   **i)** 32   **j)** 36

2. Find all the different ways each term can be written as the product of two factors:

   a) $3y$ **b)** $7a$ **c)** $5x$ **d)** $4w$ **e)** $9k$ **f)** $6m$
   g) $10b$ **h)** mn **i)** pq **j)** x^2 **k)** $2ab$ **l)** $3y^2$

3. Find the missing factor in each statement below:

   a) $4 = 2 \times$ ____   **b)** $mn = m \times$ ____   **c)** $8t = 2 \times$ ____   **d)** $9k = 3 \times$ ____
   e) $12y =$ ____ $\times 4y$ **f)** $10y =$ ____ $\times 5$ **g)** $7m =$ ____ $\times 1$ **h)** $zy = y \times$ ____
   i) $a^2 = a \times$ ____   **j)** $4s = 2s \times$ ____   **k)** $2k^2 = 2 \times$ ____   **l)** $2n^2 = 2n \times$ ____
   m) $e^2 = 1 \times$ ____   **n)** $3ab = 3b \times$ ____   **o)** $6fg = 2g \times$ ____   **p)** $6y^3 = 2y \times$ ____

4. List all the factors of:

   a) $6k$ **b)** $14b$ **c)** $7ab$ **d)** $12q$ **e)** $4kt$ **f)** pqr
   g) $13g$ **h)** fg **i)** $3x^2$ **j)** $4x^2$ **k)** x^2y **l)** $2x^2y$

5. **a)** List all the factors of: **(i)** $4a$ **(ii)** 8
   b) Find the factors common to both lists.
   c) State the highest common factor (HCF) of $4a$ and 8.

6. **a)** List all the factors of: **(i)** $3xy$ **(ii)** $12y$
   b) Find the factors common to both lists.
   c) State the HCF of $3xy$ and $12y$.

7. Find the HCF of each of the following pairs:

   a) 6 and $3x$ **b)** 12 and $8g$ **c)** 7 and $21a$ **d)** 18 and $24x$
   e) $24t$ and $36t$ **f)** $6x$ and $36x$ **g)** $21d$ and d **h)** $25g$ and $40g$
   i) x and x^2 **j)** y and y^2 **k)** $4x^2$ and $8x$ **l)** $21x^2$ and $7x$
   m) ab and a **n)** $6ab$ and $72b$ **o)** ab^2 and b **p)** ab^2 and ab
   q) a^2b and ab **r)** ab^2 and a^2b **s)** $15ab$ and 10   **t)** $18ab^2$ and $2ab$