Factorising

1. Factorise by taking out a *common factor*

   a. $4a+8$
   b. $5b-15$
   c. $4c+6$
   d. x^2+x
   e. $5y^2+3y$
   f. $3p-6p^2$
   g. $4m^2-10m$
   h. ab^2+2b
   i. ab^2-a^2b
   j. $6mn-15m^2n$
   k. $2pq^2r+6p^2q^2r^2$
   l. $4x^3+2x^2$
   m. $2x^2+6x-8$

2. Factorise by *difference of squares*

   a. y^2-4^2
   b. a^2-25
   c. $36-p^2$
   d. m^2-1
   e. $4b^2-49$
   f. $9y^2-1$
   g. $1-64c^2$
   h. $4b^2-9a^2$
   i. $100x^2-81y^2$

3. Factorise the following

   a. x^2+4x+3
   b. $b^2+7b+12$
   c. $y^2-11y+10$
   d. p^2-6p+8
   e. m^2-m-2
   f. x^2+6x-7
   g. $b^2+7b-18$
   h. $y^2+9y-10$
   i. $p^2+4p-21$
   j. $m^2-8m+15$

4. Factorise the following (harder)

   a. $3x^2+7x+2$
   b. $2b^2-5b-3$
   c. $2y^2+3y-5$
   d. $3p^2-13p+4$
   e. $3y^2-4y-4$

5. Factorise the following (mixture)

   a. x^2+3x
   b. b^2-16
   c. $y^2+9y+18$
   d. $4p^2-81$
   e. $5m^2-15m$
   f. a^2+a-20