

Albert Town High School
Mathematics Department
Factorization worksheet

Instructions: Answer all questions
Questions should be done on folder leaves

This paper is due on Tuesday November 22

1. Factorize completely

a. $-2xy - 8x$

b. $18xy - 3yz$

c. $12mn + 18mp$

d. $16m^2 - 4m$

e. $12m^2n + 24m^2n^2$

f. $72y^2p - 18y^3p^2$

g. $8x^2 - 4x$

h. $6xy + 10x^2y$

2. Complete the Factorize completely each of the following expressions

a. $4(x+3) + m(x+3)$

b. $x(x-1) - 5(x-1)$

c. $x^2(x+7) + x(x+7)$

3. Factorize completely each of the following expressions

a. $ac + ad + bc + bd$

b. $y^2 - 8y - y + 8$

c. $xy + xz + wy + wz$

d. $t^2 + 6t - 2t - 12$

e. $b^3 - b^2 + 2b - 2$

f. $2y^4 + 6y^2 + 5y^2 + 15$

g. $x^2 + 5x + 4x + 20$

h. $px + py - qz - qy$

i. $5y^2 + 2y + 10y + 4$

j. $ax - 3a + bx - 3b$

k. $8m^2 - 12m + 10m - 15$

l. $x^2 + 5x + 2x + 10$

4. Factorize the following expressions as completely as possible

a. $x^2 - y^2$

e. $p^3 - 16p$

b. $25p^2 - 36$

f. $8h^2 - 8$

c. $x^2y^2 - 1$

g. $(a+c)^2 - 4$

d. $\frac{m^2}{4} - \frac{9}{25}$

h. $(k-1)^2 + 25$

i. $16 - (b+3)^2$

j.

5. Factorize the following trinomial expressions

a. $x^2 + 4x + 3$

f. $2x^2 - 5x - 3$

b. $x^2 + 10x + 24$

g. $3x^2 - 10x - 8$

c. $x^2 + 11x - 26$

h. $3x^2 + 16xy + 5y^2$

d. $2x^2 + 11x + 12$

i. $x^2 + 5xy + 6y^2$

e. $6x^2 + 17x + 12$

6. Factorize the following expressions as completely as possible, more than one method may be required

a. $(x+2)(y-3) - 5(y-3)$

b. $(a+b)(x-y) + 4a + 4b$

c. $x^2 - y^2 + ax + ay$

d. $(x^2 + 5xy + 6y^2) + x + 3y$

All the so-called "secrets of success" will not work unless you do. ~Author Unknown