

Masroor HW: Expanding brackets and factorising ax^2+bx+c where $a=1$

1. Expand and simplify the following expressions (REMEMBER to collect like terms where necessary):

a. $7(2x + 7)$

b. $5a(a - 6)$

c. $6xy(2x - 3y)$

d. $3x(7x^2 - y)$

e. $4(2y - 7) - 3(5y - 3)$

2.

a.

i. Write down the highest common factor between $3y$ and 12

ii. Hence factorise $3y + 12$: $(\quad + \quad)$

b.

i. Find the highest common factor between $12m$ & $8m^2$

ii. Hence factorise $12m + 8m^2$: $(\quad + \quad)$

c.

i. Find the highest common factor between $5a^2b$ & $15ab^2$

ii. Hence factorise $5a^2b + 15ab^2$: $(\quad + \quad)$

3. Expand and simplify the following expressions:

a. $(x + 7)(x - 3)$

b. $(2p^2 - 3p)(3p^3 - 5)$

c. $(x + 3)(x - 3)$

d. $(a - 7)^2$

e. $(2x^2 + 1)(5x - 9)$

4. Factorise the following quadratics:

$x^2 - 8x + 7$
$x^2 + 5x - 36$
$x^2 - 16$
$25x^2 - 81$

$(x - 4)(x + 9)$
$(x + 4)(x - 4)$
$(5x - 9)(5x + 9)$
$(x - 7)(x - 1)$

5.

a. Find the square root of $36x^2$: _____

b. Also find the square root of $64y^2$: _____

c. Hence factorise $36x^2 - 64y^2$: () ()

