



HOMEWORK SHEET

Mrs. Staples - MHF 4U

1. Factor each of the following:

- (a) $5(x-1) - 2x(1-x)$ (b) $cx^2 + d - dx^2 - cx$ (c) $x^3 - 2x^2 - x + 2$ (d) $x^2 - 4y^2 - 4y - 1$
(e) $2x^2 + 7x + 3$ (f) $2w^2 + 9w + 10$ (g) $49x^4 y^2 - 4w^2$ (h) $(3x - 2y)^2 - 25$

2. More Factoring!!!!

- (a) $x^2 + 6xy + 9y^2 - 36$ (b) $x^2 - y^2 - 14y - 49$ (c) $2a^3b - 4a^2b + 2ab$ (d) $-3x^2 + 27$
(e) $2x^3 - 50xy^2$ (f) $36s^3t + 120s^2t^2 + 100st^3$ (g) $1 - 16y^4$ (h) $(x-2)^4 - 16$

3. Solve the quadratic function $3 = 6x^2 - 7x$

4. Determine the equations of the tangent lines (in $y = mx + b$ form) for the function $f(x) = 2x^2 + 9x - 5$ at each of the x-intercepts.

1. a) $(x-1)(2x+5)$
b) $(x-1)(cx-dx-d)$
c) $(x-2)(x+1)(x-1)$
d) $(x-2y-1)(x+2y+1)$
e) $(2x+1)(x+3)$
f) $(2w+5)(w+2)$
g) $(1x^2y-2w)(1x^2y+2w)$
h) $(3x-2y-5)(3x-2y+5)$

2. a) $(x+3y-6)(x+3y+6)$
b) $(x-y-7)(x+y+7)$
c) $2ab(a-1)^2$
d) $-3(x-3)(x+3)$
e) $2x(x-5y)(x+5y)$
f) $4st(3s+5t)^2$
g) $(1-2y)(1+2y)(1+4y^2)$
h) $x(x-4)(x^2-4x+8)$

Answers

3. $x = -\frac{1}{3}$

$x = \frac{3}{2}$

4. $y = -11x - 55$

and

$y = 11x - 5.5$