

Written assignments
to hand in.

Sec P6 49, 54, 72

Due Wednesday 9/13

Section P7 56, 64

Due Friday 9/15

Section P6

$$(18) \quad 2x^2 - 5x - 7 =$$

$$~~(2x + 7)(x - 1)~~$$

$$\boxed{(2x - 7)(x + 1)}$$

$$~~(2x + 1)(x - 7)~~$$

$$~~(2x - 1)(x + 1)~~$$

Discussion Problems
From the department syllabus
These are not to hand in.

Section P7, P8

WebAssign

Sections P5 + P6

Due Wednesday 9/13

by 9pm.

$$(21) \quad (3x+2)^2 + 8(3x+2) + 12$$

If we think of this as follows

$$a^2 + 8a + 12 =$$

$$(a+2)(a+6)$$

Then we get

$$(3x+2)^2 + 8(3x+2) + 12 =$$

$$(3x+2+2)(3x+2+6) =$$

$$\boxed{(3x+4)(3x+8)}$$

Another method for 31.

$$(3x+2)^2 + 8(3x+2) + 12 =$$

$$9x^2 + 12x + 4 + 24x + 16 + 12 =$$

$$9x^2 + 36x + 32 =$$

↑
This method for this particular problem, however, is more difficult because 9, 32 factorize in several ways each.

$$(27) \quad 16y^2 - z^2 =$$

$$\boxed{(4y+z)(4y-z)}$$

$$(29) \quad (x+3)^2 - y^2 =$$

$$\boxed{(x+3+y)(x+3-y)}$$

(33) Factor the perfect square polynomial.

$$z^2 - 12z + 36 =$$

$$(z-6)(z-6) =$$

$$(z-6)^2$$

(47) factor by grouping

$$3x^3 - x^2 + 6x - 2 =$$

$$(3x^3 - x^2) + (6x - 2) =$$

$$x^2(3x-1) + 2(3x-1) =$$

$$\boxed{(3x-1)(x^2+2)}$$

Remember

$$(x+a)^2 = x^2 + 2ax + a^2$$

$$(x-a)^2 = x^2 - 2ax + a^2$$

$$(54) \quad 3x^{-\frac{1}{2}} + 4x^{\frac{1}{2}} + x^{\frac{3}{2}} =$$

$$x^{-\frac{1}{2}}(3 + 4x + x^2) =$$

$$\boxed{x^{-\frac{1}{2}}(x+3)(x+1)}$$