

Quiz 5.3

1 (3 point) Divide using long division.

$$\frac{2x^2 + 11x + 12}{x + 4}$$

2. (3 point) Divide using synthetic division.

$$\frac{x^3 + 8x^2 + x - 42}{x + 3}$$

5.4

Find the greatest common factor (GCF) of the terms

$$4x, 12 \quad 6x^3, 12x^2, 15x$$

$$4x^3y^4, 8x^2y^3, 12xy^2$$

You Try

Find the greatest common factor (GCF) of the terms

$$3x^3y^5, 9x^2y^3, 12xy^4$$

Factor out the GCF

$$4a^2b^2 - 10ab^3 + 18a^3b^4$$

$$2ab^2(2a - 5b + 9a^2b^2)$$

You Try
Factor out the GCF

$$6y^3 - 14y^2 + 10y$$

Factor out the GCF

$$-2b^3 + 10b^2 + 8b$$

$$-2b(b^2 - 5b - 4)$$

You Try
Factor out the GCF

$$-5y^2 + 10y$$

Factor out the Greatest Common Binomial Factor

$$\underbrace{4x(x-3)} + \underbrace{5(x-3)}$$

$$(x-3)(4x+5)$$

Factor out the Greatest Common Binomial Factor

$$3y(2y+1) - 5(2y+1)^2$$

$$3y(\cancel{2y+1}) - 5(\cancel{2y+1})(2y+1)$$

$$(2y+1)(3y - 5(2y+1))$$

Factor out the Greatest Common Binomial Factor

$$(c+4)(c-1) + (5c-2)(c-1)$$

You Try

Factor out the Greatest Common Binomial Factor

$$4a(a-3) + 3(a-3)$$

Factor by grouping

$$\underline{4x - 4y} + \underline{ax - ay}$$

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

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

Factor by grouping

$$6x^2 + 9x - 10x - 15$$

You Try (make sure they do this one)

Factor by grouping

$$6z^2 + 2z + 9z + 3$$

You Try (make sure they do this one)

Factor by grouping

$$\underline{2x^2 + 2x} + \underline{x + 1}$$

$$2x(x+1) + 1(x+1)$$

$$(x+1)(2x+1)$$