

## Grade 10 Review – Factoring Practice

Factor.

$$a^2 + 8a + 15$$

$$x^2 + 5x - 50$$

$$3x^2 - 21x - 54$$

$$x^3 - 3x^2 - 10x$$

$$z^2 - 16z + 55$$

$$2xy^2 - 26xy + 84x$$

$$8x^2 - 13xy + 5y^2$$

$$14v^6 - 39v^3 + 27$$

$$16c^4 + 64c^2 + 39$$

$$-12s^2 - sr + 35r^2$$

$$5a^2 - 17ab + 6b^2$$

$$c^3d^3 + 2c^2d^2 - 8cd$$

$$6x^2 + 34x - 12$$

$$6x - 51xy + 27xy^2$$

$$5b^3 - 17b^2 + 6b$$

$$48c^2 - 160c + 100$$

$$18v^2 + 33v - 30$$

$$-7a^2 - 29a + 30$$

$$49a^2 + 56a + 16$$

$$225 - 16x^2$$

$$4a^2 - 256$$

$$-50x^2 - 40x - 8$$

$$4x^2 - 25$$

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

$$x^2 - 25$$

$$y^2 - 81$$

$$a^2 - 36$$

$$4c^2 - 49$$

$$9x^2 - 4$$

$$25d^2 - 144$$

$$x^2 + 10x + 25$$

$$b^2 + 8b + 16$$

$$m^2 - 4m + 4$$

$$4c^2 - 44c + 121$$

$$16p^2 + 72p + 81$$

$$25z^2 - 30z + 9$$

$$x^2 - 16xy + 64y^2$$

$$-18x^2 + 24xy - 8y^2$$

$$1 - 9a^2b^4$$

$$16x^2 - 72xy + 81y^2$$

$$36x^2 - 25y^2$$

$$50x^3 - 8xy^2$$

$$2x^2 + x - 6$$

$$2c^2 + 5c - 12$$

$$4x^2 - 16x + 15$$

$$10a^2 + 3a - 1$$

$$3n^2 - 11n - 4$$

$$6x^2 + 5x + 1$$

$$6x^2 - 13x + 6$$

$$5d^2 + 8 - 14d$$

$$3x^2 + 24x + 45$$

$$x^3 + 5x^2 + 4x$$

$$15x^2 + 4x - 4$$

$$63n^2 + 126n + 48$$

$$x^4 - 12x^2 + 36$$

$$x^4 - 24x^2 + 144$$

$$4x^2 - 20x + 25$$

$$2a^2 - 11a + 12$$

$$6n^2 + 24n - 30$$

$$3v^2 + 9v + 6$$

$$35x^2 - 27x - 18$$

$$16a^2 - 50a + 36$$

$$12x^2 - 60x + 75$$

$$49x^2 - 100$$

$$10m^2 + m - 3$$

$$6n^2 - 20 + 26n$$

$$2y^2 - 2y - 60$$

$$7x^4 + 28x^3 - 147x^2$$

$$18m^2 - 3m - 10$$

$$24d^2 + 35 - 62d$$

$$a^4 - 16$$

$$289x^6 - 81$$

Create a flow chart that would help decide which factoring strategy you should use to factor a given polynomial. Be sure to consider:

- i. The number of terms in the polynomial (2, 3, 4, ...)
- ii. Whether there is a common factor
- iii. Whether it needs to, first, be expanded
- iv. Whether it can be further factored