



Warm Up

Oct. 4

Factor each of the following:

$$1) \overset{\text{Oxx}}{3x^4} - \overset{\text{Ox}}{15x^2} + \overset{\text{O}}{24x}$$

$$3x (1x^3 - 5x + 8)$$

$$2) 18 a^3 b^6 + 27 a b^2 - 36 a b$$

$$9 a b (2 a^2 b^5 + 3 b - 4)$$

$$3) -21rt - 49 r^4 - 35r^3t$$

$$-7r (3t + 7r^3 + 5r^2t)$$

$$4) 6 xy^2 + 7x^2y + 2y$$

$$y (6xy + 7x^2 + 2)$$

Simplify then Factor:

$$1) \underline{2x^3} - \underline{5x} + \underline{7} + \underline{6x^3} + \underline{x} + \underline{1}$$

$$2x^3 + 6x^3 - 5x + 1x + 7 + 1$$

$$8x^3 - 4x + 8$$

$$4 (2x^3 - 1x + 2)$$

$$2) \underline{-7n^3y} - \underline{5n^2y^3} + \underline{2ny^2} - \underline{n^2y^3} - \underline{n^3y} - \underline{12ny}$$

$$-7n^3y - n^3y - 5n^2y^3 - n^2y^3 + 2ny^2 + 12ny$$

$$-8n^3y - 6n^2y^3 + 2ny^2 + 12ny$$

$$2n^2y (-4n - 3n^2y^2 + 1y + 6)$$

Any homework questions????

Exercises Page 155

A

4 5 $6b(i-i^2)$

B

$4f^2 + 4f^2 + 4f^2$
7 8 9 10 11 12 13 14

15 16 17 18 19 20

$i^2 - i^2 = 0$

C

21 22

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10d)

$$-3c^2 - 13c^4 - 12c^3$$

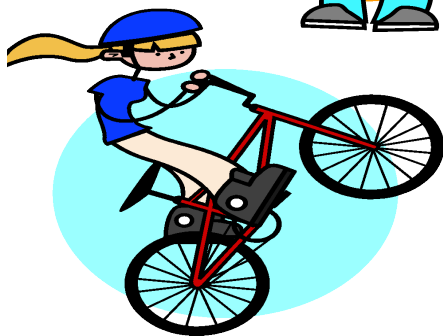
$$c^2 (-3 - 13c^2 - 12c)$$

Polynomials





Monomial 1 term



Binomial 2 terms



Trinomial 3 terms



How are terms separated?????

+
or
-



Terms are separated by “+” and “-“ signs.





How many terms?

$$\underline{4x} - \underline{5y} + \underline{q}$$

3

$$5(x - 3y)$$

2

$$\left(\frac{3}{5}x\right) - \left(\frac{4}{5}\right)$$

$$\frac{\cancel{3x} - \cancel{4}}{5}$$

2

Bonus: How many terms?

$$3x + 4y - 5x - 2y + x$$

Simplify first

$$3x - 5x + x + 4y - 2y$$
$$-1x + 2y$$

2 terms



Simplify:

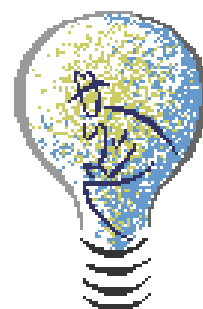
↓
collect like terms

$$\underline{2x} - \underline{7} + \underline{3x^2} - \underline{5x} - \underline{2} - 2x^2$$

$$3x^2 - 2x^2 + 2x - 5x - 7 - 2$$

$$1x^2 - 3x - 9$$

3 term

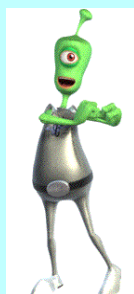


Distributing Factor

3.7 Multiplying Polynomials

Expand & Simplify

Rainbow



Expand and collect like terms.

$$4(x - 2) - 2(x + 3)$$

$$4x - 8 - 2x - 6$$

Collect like terms

$$4x - 2x - 8 - 6$$

$$\boxed{2x - 14}$$

$$2x(x^3 - 5x^2 - x - 5)$$

$$2x^4 - 10x^3 - 2x^2 - 10x$$

$$4(3xy + 7x - 5) - 3(2x + 5xy - 1)$$

$$\underline{12xy} + \underline{28x} - \underline{20} - \underline{6x} - \underline{15xy} + \underline{3}$$

$$12xy - 15xy + 28x - 6x - 20 + 3$$

$$-3xy + 22x - 17$$



Numbers, Relations & Functions 10

Name _____

Mutilpying Polynomials

Date _____

Find each product.



$$1) 5(6b + 3)$$

$$30b + 15$$



$$2) 8(6r + 3)$$

$$48r + 24$$



$$3) 2(8x + y)$$

$$16x + 2y$$



$$4) 5mn(3m + 2n)$$

$$15m^2n + 10mn^2$$



$$5) 7(x - 7y)$$

$$7x - 49y$$



$$6) 2mn(8m - 2n)$$

$$16m^2n - 4mn^2$$

7) $(4x - 2y)(6x + 6y)$

8) $(6x + 3y)(4x - 7y)$

9) $(2x + 5y)(7x - 8y)$

10) $(3x + 6y)(5x - 8y)$

11) $(5x - 4y)(5x^2 - 4xy + 6y^2)$

12) $(8x - 7y)(6x^2 + 8xy + 3y^2)$

13) $(6a^2 - 2a - 3)(8a + 2)$

14) $(2k^2 + 8k - 2)(7k + 4)$

15) $(7a^2 - 2ab + 2b^2)(a^2 - 2ab - 8b^2)$

16) $(x^2 - 4xy + 2y^2)(x^2 - 2xy - 7y^2)$