$-12\left(\frac{1}{2}x - \frac{2}{3}y = c\right)$

$6x - 8y = -1$

$-6x + 8y = -12c$

$0x + 0y = 0$

$\frac{-12c}{-12} = \frac{1}{-12}$

$c = -\frac{1}{12}$

(7) $\frac{6^4 \times 36^3}{4^5} = \frac{6^4 \times (6^2)^3}{4^5}$

$(3\cdot 2)^{10}$ $\frac{6^{10}}{4^5} = \frac{3^{10} \cdot 2^{10}}{2^5 \cdot 2^5}$

$3(5:2) \rightarrow 15:6$

$2(4:3) \rightarrow 8:6$

$8a + 4(12 - a)$

$8a + 48 - 4a$

$\frac{7n - 21 + 11}{6} = \frac{18 - 6 - 2n}{8}$

$\frac{7n - 10}{6} \times \frac{12 - 2n}{8}$ (6, −1n)

$4(7n - 10) = 6(6 - n)$

$76 = 34n$

$\frac{9}{4}\frac{(k-8)}{1} = \frac{27}{2}$

$\frac{9(k-8)}{4} = \frac{27}{2} \cdot \frac{2}{2}$

$\frac{9(k-8)}{4} = \frac{54}{4}$

$9k - 72 = 54$

$x + y = 25$

$2x + 4y = 86$

$d = 1.25\sqrt{m-1}$

3ft $\frac{36}{1.25} = \frac{1.25\sqrt{m-1}}{1.25}$ $4^2 = 14$

9.1 Intro to Polynomials

- The degree of a polynomial is the highest exponent
- Standard form: When the polynomial is written highest degree to lowest degree

Classifying Polynomials

Degree

0: Constant

1: Linear

2: Quadratic

3: Cubic

4: Quartic

4

$2x$

$3x^2$

x^3

x^4

Number of Terms

1: Monomial

2: Binomial

3: Trinomial

4: Quadnomial

$2x^2 + 4$

Examples of Classifying Polynomials

Standard Form

$4 - 3x^2$

$-3x^2 + 4$ quadratic binomial

$7x^4$

quartic monomial

$9a - 2 + 6a^4$

$6a^4 + 9a - 2$ quartic trinomial

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

$x^3 - 4x^2 + x$ cubic trinomial

$5x^2 - 4 + 2(x + 5)$

$5x^2 - 4 + 2x + 10$

$5x^2 + 2x + 6$

quadratic trinomial

Adding Polynomials: (combining like terms)

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

$2x-3$

$(6x-2x^2+5)+(3-2x-x^2)$

$-3x^2+4x+8$

$(x^3-x^4+7)+(x^2-4x+x^4+2)$

x^3+x^2-4x+9

Subtracting Polynomials: (distribute negative and combine like terms)

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

$3x-4+x-1$

$4x-5$

$(6x-2x^2+5)-(3-2x-x^2)$

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

$-x^2+8x+2$

$(x^3-x^4+7)-(x^2-4x+x^4+2)$

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

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

Homework:

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