STUDY GUIDE #1

complete all evens

Algebra 1 Name_____ ID: 1

Mixed Polynomial Review

Date_____ Period_____ Identify

(1) **Simplify each expression.** (2) classify by degree and term (3) coeff. and constants

1) $(5n - 11n^5 - 6) - (4n^5 - 6 + 8n^3)$

$7n^5 + 3n^3 - 7n - 9$

Degree: 5th power

Term: 4 poly

coeff: 7, 3, -7

constants: -9

2) $(7n^3 - 9 - 4n^5) + (-4n^3 + 11n^5 - 7n)$

3) $(12v - 4v^3 + 13) - (6v^3 - 9v^4 - 14)$

$-5p^4 - 11 - 3p + 14 - 9p + 10p^4$

$5p^4 - 12p + 3$

Degree: 4th power

Term: 3 tri

coeff: 5, -12

constant: 3

4) $(-5p^4 - 11 - 3p) - (-14 + 9p - 10p^4)$

5) $(13v^5 + 12v^4 + 2v^2) - (5v + 12v^2 + 3v^5)$

$-14p^5 - 11p^4 - 8$

Degree: 5th power

Term: 3 tri

coeff: -14, -11

constant: -8

6) $(3p^4 - 2 - 10p^5) + (-4p^5 - 14p^4 - 6)$

7) $(-2 + 9v^4 + 12v) + (v + 10 - 10v^4)$

$-8b^5 + 9b^2 - b + b^5 + 7b + 7b^2$

$-7b^5 + 16b^2 + 6b$

Degree: 5th power

Term: 3 tri

coeff: -7, 16, 6

constant: none

8) $(-8b^5 + 9b^2 - b) - (-b^5 - 7b - 7b^2)$

9) $(6x^2 - 7x^3 + 2x^5) + (-10x^3 - 9x^5 + 8x^2)$

$-11x^5 + 24x^3 - 9$

Degree: 5th power

Term: 3 tri

coeff: -11, 24

constant: -9

10) $(13x^3 - 10 - 5x^5) + (11x^3 - 6x^5 + 1)$

Find each product.

11) $(-2x - 4)(-3x + 7)$

12) $(-2n - 1)(8n + 2)$

$-16n^2 - 4n - 8n - 1$

$-16n^2 - 12n - 1$

Degree: 2 Quadratic

Term: 3 tri

coeff: -16, -12

constant: -1

13) $(-3n + 6)(-n + 3)$

14) $(r - 4)(-7r - 1)$

$-7r^2 - r + 28r + 4$

$-7r^2 + 27r + 4$

Degree: 2 Quadratic

Terms: 3 tri

coeff: -7, 27

Constant: 4

15) $(-6k - 3)(-2k - 8)$

16) $(-9x - 3)(-5x^2 + 11x + 4)$

$45x^3 - 99x^2 - 36x + 15x^2 - 33x - 12$

$45x^3 - 84x^2 - 69x - 12$

Degree: 3 cubic

Term: 4 poly

coeff: 45, -84, -69

constant: -12

17) $(-10a - 9)(-7a^2 - a + 2)$

18) $(-12x - 4)(-2x^2 - x - 6)$

$24x^3 + 12x^2 + 72x + 8x^2 + 4x + 24$

$24x^3 + 20x^2 + 76x + 24$

Degree: 3 cubic

Term: 4 poly

coeff: 24, 20, 76

constant: 24

19) $(-12n - 10)(3n^2 + 3n - 7)$

20) $(12v + 12)(-9v^2 - 4v - 10)$

$-108v^3 - 48v^2 - 120v - 108v^2 - 48v - 120$

$-108v^3 - 156v^2 - 168v - 120$

Degree: 3 cubic

Term: 4 poly

coeff: -108, -156, -168

constants: -120

~~ODDS~~ Evens

Algebra I Name_____ ID: 1

Mixed Radical Review Date_____ Period____

Simplify.

1) $\sqrt{18}$

$\sqrt{9}\sqrt{2}$

$3\sqrt{2}$

2) $\sqrt{20}$

$\sqrt{4}\sqrt{5}$

$\boxed{2\sqrt{5}}$

3) $\sqrt{20m}$

4) $\sqrt{50n^2}$

$\sqrt{25}\sqrt{2}$

$\boxed{5n\sqrt{2}}$

5) $4\sqrt{27n}$

6) $4\sqrt{32k^2}$

$\sqrt{16}\sqrt{2}$

$\boxed{8k\sqrt{2}}$

7) $\sqrt{3} \cdot \sqrt{12}$

8) $\sqrt{5} \cdot \sqrt{20}$

$\sqrt{100}$

$\boxed{10}$

9) $-2\sqrt{8} \cdot \sqrt{5}$

10) $\sqrt{10} \cdot \sqrt{5}$

$\sqrt{50}$

$\sqrt{25}\sqrt{2}$

$\boxed{5\sqrt{2}}$

11) $\sqrt{5x^2} \cdot \sqrt{15x^2}$

$\sqrt{75x^4}$

$\sqrt{25}\sqrt{3}$

$\boxed{5x^2\sqrt{3}}$

12) $\sqrt{3x^3} \cdot \sqrt{5x}$

$\sqrt{15x^4}$

$\boxed{x^2\sqrt{15}}$

13) $\frac{x\sqrt{4}}{\sqrt{9}}$

14) $\frac{\sqrt{8}}{\sqrt{4}}$

15) $\frac{4}{x\sqrt{5}}$

16) $\frac{\sqrt{3}}{\sqrt{2}}$

17) $\sqrt{3} + \sqrt{3}$

18) $\sqrt{8} + \sqrt{18}$

$\sqrt{4}\sqrt{2}$ $\sqrt{9}\sqrt{2}$

$2\sqrt{2} + 3\sqrt{2}$

$\boxed{5\sqrt{2}}$

19) $-3\sqrt{24} + 2\sqrt{6}$

20) $-\sqrt{6} - 3\sqrt{6}$

$\boxed{-4\sqrt{6}}$