Algebra 1
Unit 1 Quiz 1 Review

K H D b d c M

Name: KEY

1 mL = 0.034 oz	1 mile = 5280 ft	1 yard = 3 ft
1 inch = 2.54 cm	73 gallons = 2 barrels	1 gallon = 4 quarts
*1 meter = 3.28 feet	1 km = 0.62 miles	1 light second = 300,000,000 meters
1 kg = 2.2 lbs	1 lb = 0.45 kg	1 quart = 0.946 liters
1 ton = 2000 lbs	1 foot = 12 inches	1 in = 2.54 cm = 25.4 mm

Convert the following. Round each answer to the nearest hundredth and place your answer in the space provided.

1) Convert 0.75 yards to cm.

$.75 \text{ yds} * \frac{3 \text{ ft}}{1 \text{ yd}} * \frac{12 \text{ in}}{1 \text{ ft}} * \frac{2.54 \text{ cm}}{1 \text{ in}} = 68.58 \text{ cm}$

$.75 \text{ yds} * \frac{3 \text{ ft}}{1 \text{ yd}} * \frac{1 \text{ m}}{3.28 \text{ ft}} * \frac{100 \text{ cm}}{1 \text{ m}} = 68.60 \text{ cm}$

2) Convert 1.2 miles to inches.

$1.2 \text{ miles} * \frac{5280 \text{ ft}}{1 \text{ mile}} * \frac{12 \text{ in}}{1 \text{ ft}} = 76{,}032 \text{ in}$

3) Convert 4,580 minutes to hours.

$4{,}580 \text{ min} * \frac{1 \text{ hr}}{60 \text{ min}} = 76.33 \text{ hrs}$

4) Convert 1.6 weeks to minutes.

$1.6 \text{ weeks} * \frac{7 \text{ day}}{1 \text{ wk}} * \frac{24 \text{ hr}}{1 \text{ day}} * \frac{60 \text{ min}}{1 \text{ hr}} = 16{,}128 \text{ min}$

5) Convert 32 cm/sec to ft/hr.

$\frac{32 \text{ cm}}{1 \text{ sec}} * \frac{1 \text{ in}}{2.54 \text{ cm}} * \frac{1 \text{ ft}}{12 \text{ in}} * \frac{60 \text{ sec}}{1 \text{ min}} * \frac{60 \text{ min}}{1 \text{ hr}} = 3{,}779.53 \text{ ft/hr}$

$\frac{32 \text{ cm}}{1 \text{ sec}} * \frac{1 \text{ m}}{100 \text{ cm}} * \frac{3.28 \text{ ft}}{1 \text{ m}} * \frac{60 \text{ sec}}{1 \text{ min}} * \frac{60 \text{ min}}{1 \text{ hr}} = 3{,}778.56 \text{ ft/hr}$

For questions 6-10, complete the chart below.

	Name by Degree	Name by # of Terms	Constant(s)	Coefficient(s)	Variable(s)
6) $2x^2 - 6x + 9$	Quadratic	tri	9	2, -6	x^2, x
7) $x^3 + 16x^2$	cubic	bi		1, 16	x^3, x^2
8) $-4x^3 + 1x^2 + 2x - 1$	Cubic	poly	-1	-4, 1, 2	x^3 x^2 x
9) $11x + 7$	Linear	bi	7	11	x
10) $5x^3 + 7x - 2$	cubic	tri	-2	5, 7	x^3 x

Simplify each expression below. Be sure your final answer is in standard form. Circle or box your final answer.

11) $(2 + 2x^2) - (-6 + 4x^2)$

$2 + 2x^2 + 6 - 4x^2$

$\boxed{-2x^2 + 8}$

12) $(2x^2 - 4x^3 + 8x) - (-3x - 5x^3)$

$2x^2 - 4x^3 + 8x + 3x + 5x^3$

$\boxed{x^3 + 2x^2 + 11x}$

13) $(8n - 7) - (-8 - 2n^3 + 4n - 7n^4)$

$8n - 7 + 8 + 2n^3 - 4n + 7n^4$

$\boxed{7n^4 + 2n^3 + 4n + 1}$

14) $(6x - 7x^4 + 6x^3) + (-x - 7x^3)$

$\boxed{-7x^4 - x^3 + 5x}$

15) $(7a^3 - 6a^4 + 6a^2) + (7a^4 + 4a) + (-2a^2 + 6a^4)$

$\boxed{7a^4 + 7a^3 + 4a^2 + 4a}$

16) $(8n^2 - 6 + 7n^4 - 6n) + (5n^2 + 2n - 6n^4) + (3n^2 + 3 - 6n)$

$\boxed{n^4 + 16n^2 - 10n - 3}$

17) $-7(8b-6)$

$\boxed{-56b+42}$

18) $8x(3x+2)$

$\boxed{24x^2+16x}$

19) $(-7p+4)(7p-7)$

$-49p^2+49p+28p-28$

$\boxed{49p^2+77p-28}$

20) $(6m+3)(-7m+4)$

$42m^2+24m-21m+12$

$\boxed{42m^2+3m+12}$

21) $(4p-3)(-6p^2+5p+6)$

$-24p^3+20p^2+24p+18p^2-15p-18$

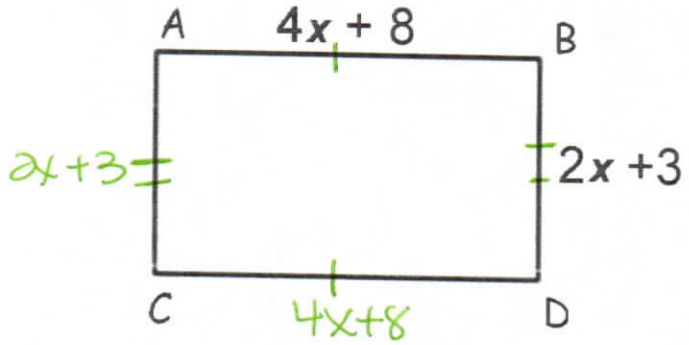
$\boxed{-24p^3+38p^2+9p-18}$

22) $(-8x+3)(-8x^2-4x+2)$

$64x^3+32x^2-16x-24x^2-12x+6$

$\boxed{64x^3+8x^2-28x+6}$

Use the figure below to answer questions 23 and 24.



23) Find the perimeter.

$4x+8+4x+8+2x+3+2x+3$

$\boxed{12x+22}$

24) Find the area.

$(4x+8)(2x+3)$

$8x^2+12x+16x+24$

$\boxed{8x^2+28x+24}$