Name: _____ Class Period: _____

Algebra 1 Agenda

End of 4th six weeks is 2/13. Don't forget the last page!!

				Stamp
Monday	2/9/2015	Objective:	Integer Exponents	
		Assignment:	Practice #1-18	
Tuesday	2/10/2015	Objective:	Multiplication Properties of Exponents	
		Assignment:	Practice #1-14	
Wednesday	2/11/2015	Objective:	Division Properties of Exponents	
		Assignment:	Practice #1-10	
Thursday	2/12/2015	Objective:	Adding and Subtracting Polynomials	
		Assignment:	Practice #1-13	
Friday	2/13/2015	Objective:	Quiz	
		Assignment:	4.6 Due Today	

Warm-Up Grade: _____   Final Weekly HW Grade: _____

Bellwork

Name: _____

Period: _____

Week of _____ - _____

Monday	thursday

Tuesday	Friday

Wednesday	CHALLENGE

Practice – Integer Exponents   **pp 446-448**

Name _____ Date _____ Period _____

Simplify the expressions below.

1. 4^{-2}

2. $(-5)^{-2}$

3. $\dfrac{1}{2^0}$

4. $\left(\dfrac{1}{4}\right)^2$

5. -5^2

6. $\dfrac{4}{2^{-3}}$

Simplified expressions are shown below. Fill in the box with the value that makes each equation true.

7. $4n^{\boxed{}} = \dfrac{4}{n^2}$

8. $\dfrac{a^{\boxed{}}}{3b^{\boxed{}}} = \dfrac{ab^3}{3}$

In the lab, the population of a certain bacteria doubles every month. A study uses the expression $3000 \bullet 2^m$ to model a population of 3000 bacteria after m months of growth.

9. What is the population of bacteria at the beginning of the study when $m=0$?

10. What is the population of bacteria at $m=-2$? What does this value represent?

Evaluate each expression for $x=-3$ and $y=5$.

11. $3y^{-2}$

12. $(4x)^{-2}$

13. $\dfrac{1}{x^{-3}y^2}$

14. $x^0 y^{-3}$

Simplify each expression.

15. $a^{-5}b^{-7}$

16. $a^1 c^0$

17. $\dfrac{7ab^{-2}}{3w}$

18. $\dfrac{15s}{5t^{-3}}$

Practice – Multiplication Properties of Exponents   **pp 460-466**

Name _____ Date _____ Period _____

Simplify the expressions below:

1. $n^6 g n^2$

2. $x^2 g x^{-3} g x^4$

3. $(-3)^3 \bullet (-3)^2$

4. $a^5 g a^0 g a^{-5}$

Simplify the expressions below:

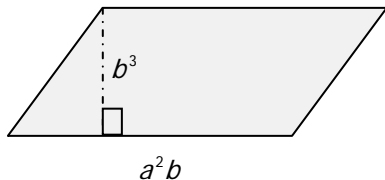5. $(x^2)^5$

6. $(3^{-2})^{-4}$

7. $(a^{-3})^4 g (a^7)^2$

8. $\left(p^4 q^2\right)^7$

Find the missing exponent in each expression:

9. $a^{\square} a^6 = a^{10}$

10. $(a^2 b^{\square})^4 = a^8 b^{12}$

11. $(a^3 b^6)^{\square} = \dfrac{1}{a^9 b^{18}}$

12. Write an expression for the area of the figure below:

13. Which expression best represents $\left(3a^2 b^3 c\right)\left(-3ab\right)\left(-2a^3 bc^3\right)$?

F $18a^6 b^5 c^4$

G $-18a^6 b^3 c^3$

H $18a^6 b^9 c^4$

J $-8a^6 b^5 c^4$

14. Which expression describes the area in square units of a rectangle that has a length of $10x^3 y^4$ units and a width of $5x^2 y$ units?

F $2x^5 y^4$

G $15x^5 y^5$

H $50x^5 y^4$

J $50x^5 y^5$

Practice –Division Properties of Exponents   **pp 467-470**

Name _____ Date _____ Period _____

Simplify the expressions below:

1. $\dfrac{-3x^7}{6x^3}$

2. $\dfrac{15x^{-3}}{x}$

3. $\dfrac{8x^{10}y^7}{2x^6y^6}$

4. $\left(\dfrac{x^{-5}}{x^{-2}}\right)^5$

5. $\dfrac{x^9y}{(x^2y^9)^2}$

6. $\left(\dfrac{3b^2c}{6ab^3}\right)^{-2}$

7. A rectangular parking lot has an area of $10a^3b^6$ square yards. If the length of the park is $2a^3$, what is the width of the park?

8. Which expression best represents the simplification of $(3m^{-2}n^4)(-4m^6n^{-7})$?

    F $-\dfrac{12m^4}{n^3}$

    G $-\dfrac{1}{12m^4n^3}$

    H $-\dfrac{m^4n^3}{12}$

    J $-\dfrac{12n^3}{m^4}$

9. Which expression is equivalent to $(-5abc^4)(-3a^3c^2)(-4a^2b^4c^3)$?
    A. $-12a^6b^5c^9$
    B. $-12a^6b^4c^{24}$
    C. $-60a^6b^5c^9$
    D. $-60a^9b^9c^9$

10. The volume of a rectangular prism is $125x^3$ cubic units, and the area of its base is $25x^2y^2$ square units. What is the height of the prism in units if $x > 0$ and $y > 0$?

Practice – Adding and Subtracting Polynomials   **pp 476 – 489**

Name _____ Date _____ Period _____

Classify each polynomial according to the number of terms.

1. $5n^3 + 4n$ 2. $4y^6 - 5y^3 + 2y - 9$ 3. $3b^7 + 9b^5 + 2b^7 - 5$ 4. $\frac{1}{4}wx^5y^2z^2$

Simplify the following polynomials.

5. $3x^3 - 4 - x^3 + 1$ 6. $4.4x^2 + 3.1x - 6.3x - 2x^2$

7. $(2t^2 - 8t) + (8t^2 + 9t)$ 8. $(-7x^2 - 2x + 3) + (4x^2 - 9x)$

9. $(3s^4 + 4s) - (-10s^4 + 6s)$ 10. $(3x^2 - x) - (x^2 + 3x - x)$

11. $(x^2 - 3x + 7) + (2x - 5 + 3x^2) - (x^2 - 6x)$ 12. $(3x^2 - 2x + 8) - (x^2 - 4) + (-4x^2 - 5x - 2)$

12. The recreation field at Huffines Park is shaped like a rectangle with a length of $15x$ yards and a width of $10x - 3$ yards. Write a polynomial in simplest form for the perimeter of the field. Then calculate the perimeter if $x = 2$.

13. Darnell and Stephanie have competing vending machine businesses. Darnell's profit can be modeled with the polynomial $c^2 + 8c - 100$. Were c is the number of items sold. Stephanie's profit can be modeled with the polynomial $2c^2 - 7c - 200$. Write a polynomial in simplest form to show how much money they can expect to earn if they decided to combine their businesses.

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Test Preparation Practice
Algebra 1

A.5.C Use, translate, and make connections among algebraic, tabular, graphical, or verbal descriptions of linear functions.

Solve each problem. Choose the best answer for each question and record your answer on the Student Answer Sheet. Figures are not drawn to scale

1. Marianne is solving this word problem:
   The sum of three consecutive even numbers is 42.
   The equation that she uses is
   $n + (n + 2) + (n + 4) = 42$. What does the variable n represent?

   A The greatest number

   B The average of the numbers

   C The middle number

   D The least of the three numbers

2. Which equation describes the relationship between x and y?
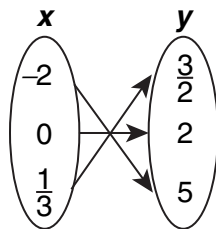
   F $x + y = 4$

   G $x + 2y = 4$

   H $y = -2x - 8$

   J $3x + 2y = 4$

3. What equation represents the data in the table?

x	-3	1	4	6
y	-7	-3	0	2

   A $y = -\frac{3}{2}x$

   B $y = x - 4$

   C $y = \frac{3}{2}x + 4$

   D $y = 2x - 4$

4. If $(x, -3)$ is a solution to the equation $y = -3x + 4$, what is the value of x?

   F $\frac{1}{3}$

   G $\frac{2}{3}$

   H 2

   J $\frac{7}{3}$

5. Brian decides to start a lawn mowing business. He calculates the charge for each lawn using the function $f(t) = 4t + 5.5$, where t is the number of hours spent mowing the lawn. He always works for at least one full hour. Which statement *cannot* be inferred from this information?

   A Brian's hourly rate is $4.

   B Brian is expecting to use $5.50 worth of gas for each job.

   C Brian charges a flat fee of $5.50 regardless of the size of lawn or the length of the job.
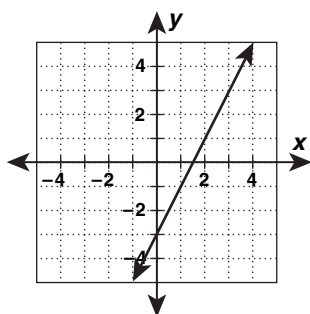
   D The minimum Brian will make for a job is $9.50.

6. Which function corresponds to the table?

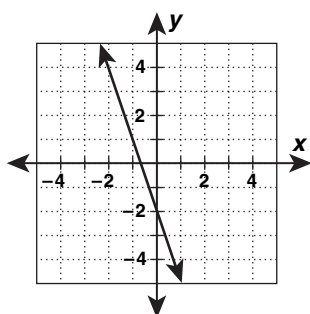 | x | -3 | 0 | 3 | 6 |
   |---|---|---|---|---|
   | y | 2 | 4 | 6 | 8 |

   F $y = -\frac{2}{3}x$

   G $y = x + 4$

   H $y = \frac{2}{3}x + 4$

   J $y = 2x + 4$

Holt Algebra 1

7. Which function includes the data set {(0, −2), (2, −8), (6, −20)}?
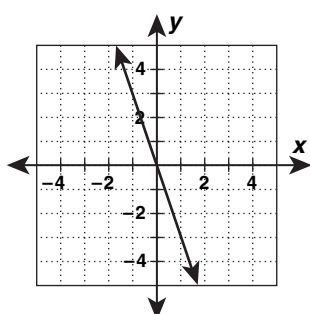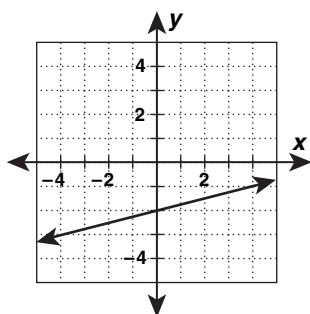
A

B

C

D

8. The graph of $2x - y = 3$ does NOT pass through which of the following points?

F (2, 0)

G (0, −3)

H (−1, −5)

J $(\frac{1}{2}, -2)$

9. What is the equation of the line shown in the graph?
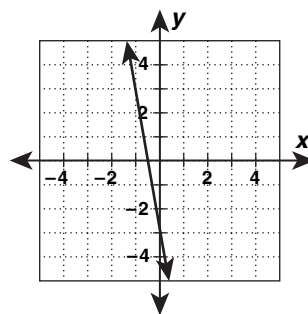
A $y = -3x + 6$

B $2x + 4x - 3 = 0$

C $y = -6x - 3$

D $-5x - 2x - 2 = 0$

10. Translate to an equation: Three times a number decreased by 2 is 10.

F $3x - 2 = 10$

G $3x = 10$

H $x - 2 = 10$

J $3x + 10 = 2$

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