Name: _____ Class Period: _____

5.3

Algebra I Agenda

Spring Break is next week!

				Stamp
Monday	3/2/2015	Objective:	More Factoring Practice	
		Assignment:	Practice #1-12	
Tuesday	3/3/2015	Objective:	Applications	
		Assignment:	Practice #1-7	
Wednesday	3/4/2015	Objective:	All the Factoring	
		Assignment:	Practice #1-4	
Thursday	3/5/2015	Objective:	Review	
		Assignment:	Study!! Review is worth bonus points on the test!	
Friday	3/6/2015	Objective:	TEST Unit 8	
		Assignment:	5.2 - 5.3 Due Today	

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

Bellwork

Name: _____

Period: _____

Week of _____ - _____

Monday

thursday

Tuesday

Friday

Wednesday

CHALLENGE

Practice – Factoring Day 3 **pp 540-571**

Name _____ Date _____ Period _____

What Should You Say If You See a Tall, Wrought-Iron Tower in Paris, France?

Factor each polynomial completely, show all work on the back or separate piece of paper.
Find your answer below and notice the two letters next to it.
Write these letters in the two boxes above the exercise number at the bottom of the page.

1. $x^2 + x - 30$
2. $3x^2 - 17x + 24$
3. $7x^2 + 35x + 28$
4. $x^3 + 20x^2 - 21x$
5. $4x^2y - 10xy - 6y$
6. $32x^2 - 18$
7. $2x^2y - 22xy + 60y$
8. $x^2 - 8x - 33$
9. $15x^2 - 35x - 30$
10. $48x^3 - 3x$
11. $35x^2 - 100x - 15$
12. $6x^3 - 21x^2 - 12x$

ANSWERS

(AD) $2(2x-3)(8x+3)$

(AN) $2y(2x+1)(x-3)$

(OL) $x(x-21)(x+1)$

(UI) $(3x-8)(x-3)$

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

(EF) $7(x+4)(x+1)$

(ET) $2y(2x-3)(x+1)$

(SR) $(x+6)(x-5)$

(FO) $7(x-1)(x-4)$

(LL) $x(x+21)(x-1)$

(NT) $(3x-3)(x-8)$

ANSWERS

(IS) $5(7x-3)(x+1)$

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

(TE) $2y(x-6)(x-5)$

(AT) $5(3x+2)(x-3)$

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

(EP) $5(3x+2)(x+3)$

(YQ) $(x-11)(x+3)$

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

(LS) $(x-3)(x+11)$

(IX) $2y(x+6)(x+5)$

(EA) $5(7x+1)(x-3)$

6	9	1	11	4	8	2	7	5	12	3	10

Practice – Applications of Factoring pp 524-571

Name _____ Date _____ Period _____

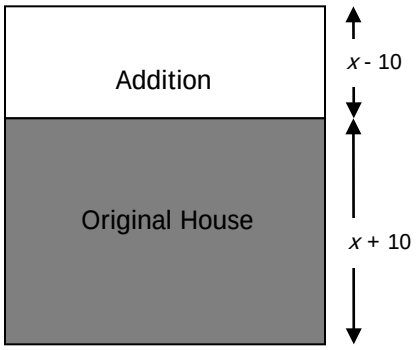
1. The Parthenon in Athens, Greece, is an ancient structure that has a rectangular base. The area of the base is modeled by the expression $3t^2 - 11t + 10$ *square meters*. What are the dimensions of the base?

2. The area of a rectangular room is given as $x^2 - 16x + 63$ square feet. If the width of room is $(x - 7)$, what is the length?

The figure shows the plans for an addition on the back of a house.
Use the figure to answer questions 3-5.

3. The area of the addition is $(x^2 + 10x - 200)\ ft^2$. What is its length?

4. What is the area of the original house?



5. The homeowners decide to extend the addition. The area with the addition is now $(x^2 + 12x - 160)\ ft^2$. By how many feet was the addition extended?

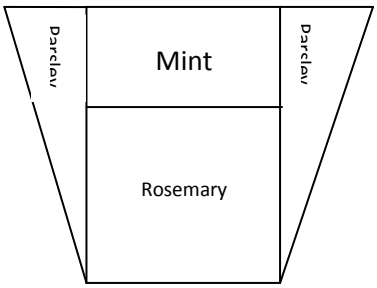
6. The area of a soccer field is $(6x^2 + 25x + 25)$ *square meters*. The width of the field is $(2x + 5)$ *meters*. What is the length of the field?

7. For a certain college, the number of applications received after x recruiting seminars is modeled by the polynomial $3x^2 + 490x + 6000$. What is this expression in its factored form?

Practice – Applications of Factoring Day 2 pp 524-571

Name _____ Date _____ Period _____

The diagram below shows four sections of an herb garden. Use the figure to answer questions 1 and 2.



1. The section where rosemary grows is square and has an area of $4x^2$ feet. What is the length of one side?

   A. x feet
   B. x^2 feet
   C. $2x$ feet
   D. $4x$ feet

2. Rosemary and mint cover $(6x^2 - 2x)$ square feet. Assuming the length is adjacent to rosemary, what is the width of the mint section?

   A. $(2x)$ feet
   B. $(x - 1)$ feet
   C. $(2x - 2)$ feet
   D. $(3x - 1)$ feet

3. Instructors led an exercise class from a raised rectangular platform at the front of the room. The width of the platform was $(x + 1)$ feet and the area was $(3x^2 + 2x - 1)\ ft^2$. Find the length of this platform.

4. A fence will be built around a rectangular garden with an area of $(x^2 + 6x - 40)\ ft^2$.

   A. Find the dimensions of the garden.

   B. Write an expression for the perimeter of the garden.

   C. Find the perimeter of the garden when $x = 5$ feet.

Name _____ Date _____ Class _____

Test Preparation Practice

Algebra 1

A.6.A Develop the concept of slope as rate of change and determine slopes from graphs, tables, and algebraic representations.

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. What is the slope of the line $y = \frac{1}{3}x + 4$?

A -4

B $-\frac{1}{3}$

C $\frac{1}{3}$

D 4

2. Which of the following lines, passing through the given points, has the steepest slope?

F Line 1: (5, 6) and (4, 3)

G Line 2: (7, 5) and (4, 3)

H Line 3: $(-1, 8)$ and (7, 7)

J Line 4: $(-1, 3)$ and (2, 3)

3. Roberto rented a car at a rate of $75 per day and $0.15 per mile. This situation can be represented by the function $y = 0.15x + 75$. What is the slope of this equation?

A 0.15

B 5

C 75

D x

4. What is the slope of a line that contains the points (3, 9) and (3, 4)?

F $-\frac{5}{6}$

G 0

H $\frac{6}{5}$

J The slope is undefined.

5. Determine the slope of the line passing through the points listed in the table.

x	0	1	2	3
y	12	10	8	6

A 2

B $\frac{1}{2}$

C 0

D -2

6. Find the slope of the line identified by the equation $6x + 9y = 18$.

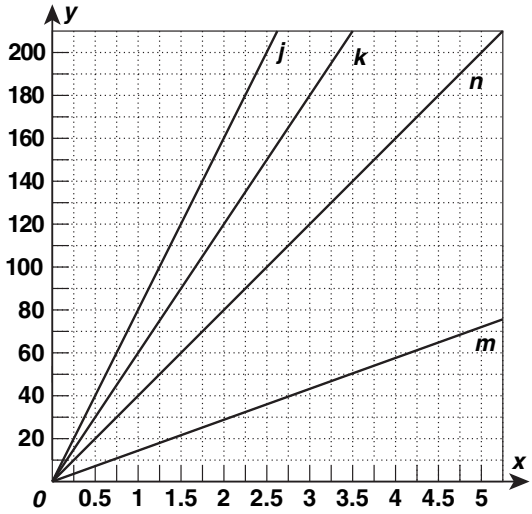
F $-\frac{2}{3}$

G $\frac{2}{3}$

H $\frac{3}{2}$

J 2

7. Which line has a slope, or rate of change, of 60?



A Line j

B Line k

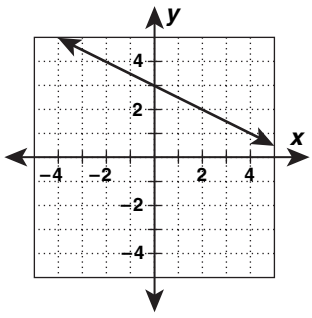
C Line n

D Line m

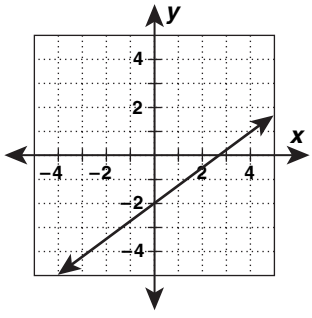
Name _____ Date _____ Class _____

8. Which graph has a rate of change of one-half?

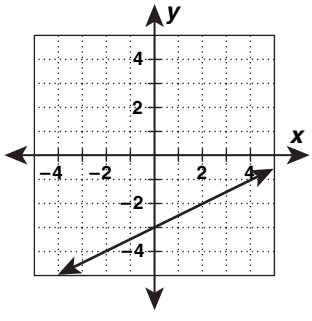
A



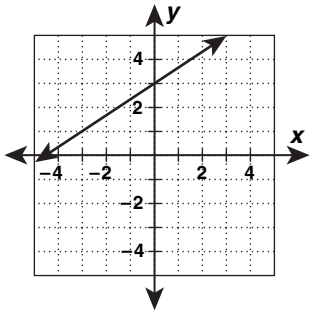
B



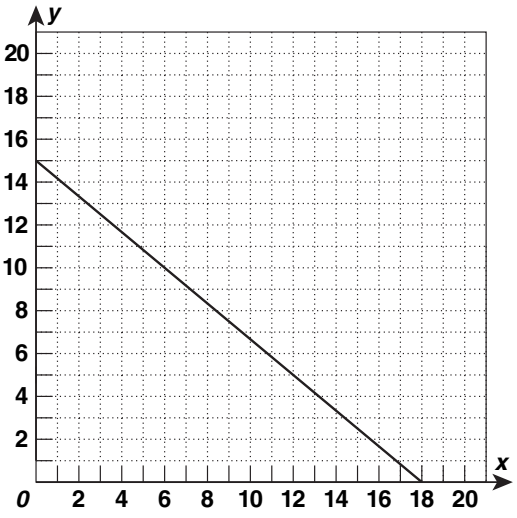
C



D



9. What is the slope of the linear function shown in the graph?



F $-\frac{6}{5}$

G $-\frac{5}{6}$

H $\frac{5}{6}$

J $\frac{6}{5}$

10. Kris borrowed money from her mom to pay for her prom dress. The table shows the remaining balance, *b*, of Kris's loan after each payment that she makes to her mom.

Kris' Loan Balance

Number of Payments	Loan Balance, *b*
1	200
2	180
3	160
4	140
5	120
6	100

If you graphed this linear function, what would be the slope of the line?

A 200

B 100

C −5

D −20