Warm Up

Page 28

Week 6, Lesson 1

Page 29

Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question

EQ: How do I distinguish between irrational and rational numbers? (N-RN.3)

Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question

Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-u

Warm-up: Answer the following questions.

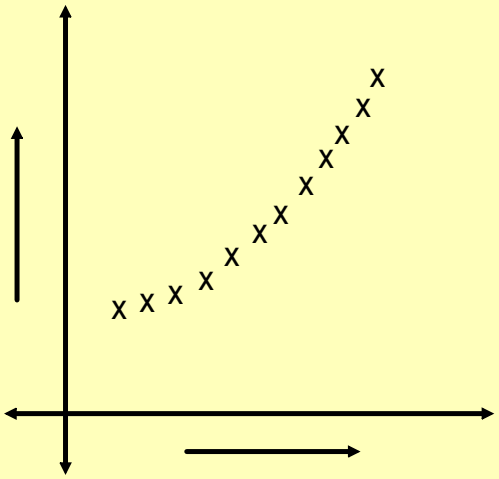
1) Does the graph have a positive or negative correlation?

+

2) Does the graph have a strong or weak correlation?

strong

0.5-1

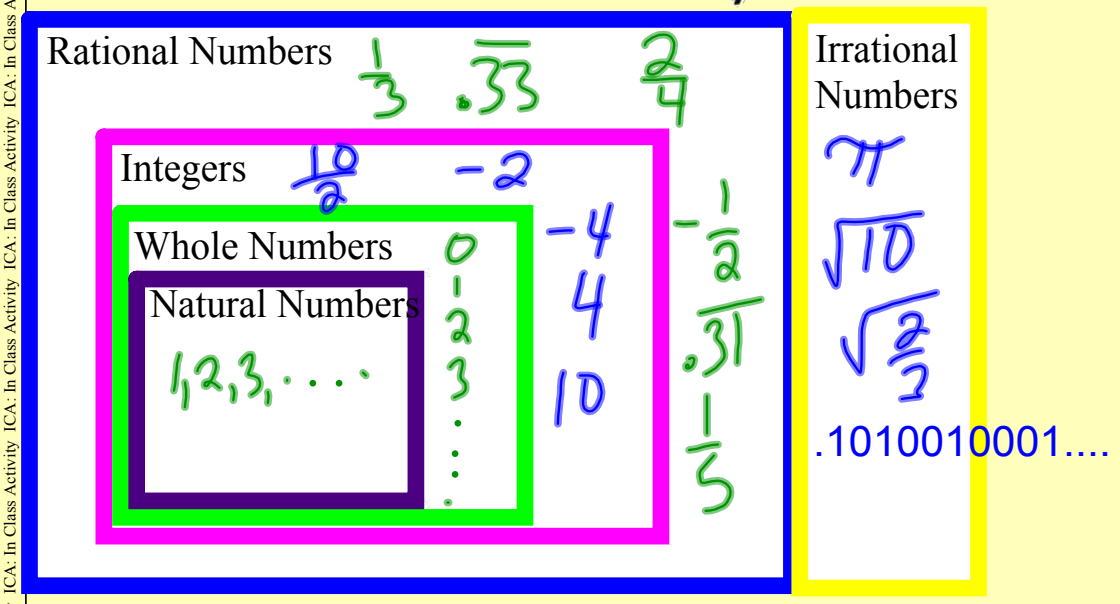


3) What is the approximate correlation coefficient for this graph?

0.7- 0.8

PAGE 28:

The Real Number System



Notes Notes

The Real Number System

N-RN.3

Irrational Numbers

Rational Numbers

Integers

Whole Numbers

Natural Numbers

Summary:

week 6

Notes Notes

The Real Number System

N-RN.3

Irrational Numbers

Definition: Values never end and never have a pattern to them

Facts/ Characteristics: Fractions roots decimals * New Repeats

Examples: π $\sqrt{\frac{2}{3}}$ .0456789...

Non- Examples: $-5\frac{1}{2}$ 2

Rational Numbers

Definition: Values end and/or have a pattern to them

Facts/ Characteristics: fractions Decimals roots have an ending to them

Examples: $\frac{1}{3}, \sqrt{9}, -5$

Non- Examples: $\sqrt{2}, \pi, \sqrt{\frac{2}{3}}$

Integers

Definition: positive and negative whole numbers

Facts/ Characteristics: NOT a fraction NOT a decimal

Examples: $-2, 4, 5, -6$

Non- Examples: $3.4, \frac{9}{6}, \frac{8}{10}$

Whole Numbers

Definition: all positive whole numbers including 0

Facts/ Characteristics: NOT a fraction NOT a decimal ALWAYS positive

Examples: 0, 1, 2, 3, 4...

Non- Examples: $-2, \frac{4}{3}, \frac{5}{8}$

Natural Numbers

Definition: all positive whole numbers

Facts/ Characteristics: NOT a fraction NOT a decimal ALWAYS positive NEVER 0

Examples: 1, 2, 3, 4, 5, 6...

Non- Examples: 0, $-10, \frac{10}{10}$

ICA:

1) Which of the following statements shows a relationship that is correlated but *not* causal?

A) The amount of rainfall received and level of water in the lake.
B) The number of lights left on each day and the amount of the electric bill.
C) The increase of warm, sunny days and the number of ice cream vendors visible.
D) The number of hours worked and how much money is made.

2) Which of the following statements shows a relationship that is correlated but *not* causal?

A) The number of tardies to class and the number of detentions received.
B) The season of the year and the number of water related injuries/deaths.
C) As the temperature rises, more the mercury in a thermometer will expand and rise.
D) The larger the dimensions of a rectangular patio, the more square footage there will be.

3) Which of the following statements shows a causal relationship and *not* just a correlated on

A) An individual's decision to work in construction and his diagnosis of skin cancer.
B) A decrease in temperature and the increase in attendance at an ice skating rink.
C) As a child's weight increases so does her vocabulary.
D) The number of minutes spent exercising and the amount of calories burned.

4) Which statement below might be caused by the statement, "The more the furnace runs...."

A) The less time individuals will spend outside
B) The longer you will have to let your car warm up
C) The colder it is outside
D) The warmer the house becomes

Spiral Review Spiral Review Spiral Review Spiral Review Spiral Review Spiral Review Spiral Review Spiral Review Spiral Review Spiral Review Spiral Review

1. Andrew is considering accepting one of two sales positions. ABC Company offers a yearly salary of $50,000. XYZ Company offers a yearly salary of $38,000 plus a 9% annual commission on sales. For what amount of sales s is the salary at XYZ Company greater than the salary at ABC Company?

2. $5 \cdot 2 + \left(3^2 \div 3 + \sqrt{16}\right)$

3. $8(x+2) - 5x = 28$

4. $7x + 4 = 3x - 20$

5. $11 + x - 7 = 21$

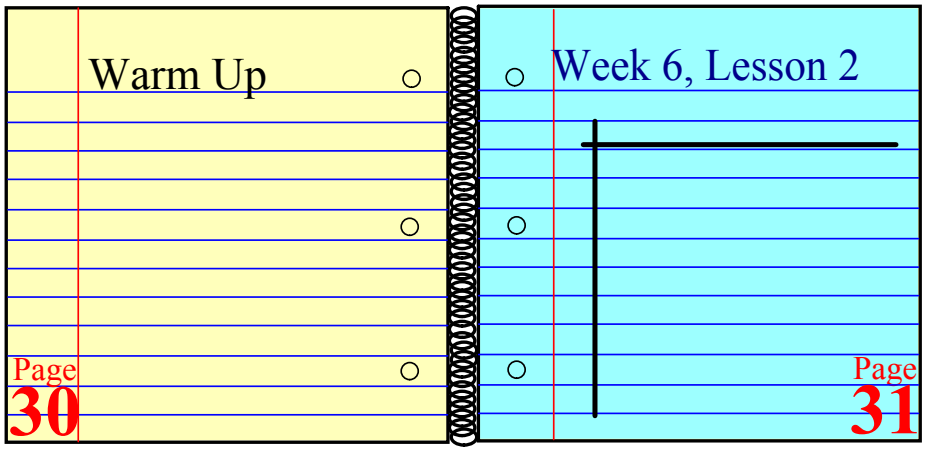
6. $13 = -3(x+5) + 7x$

7. $9x + 2 = x + 5$

8. $11x - 2(8x+5) = 15$

9. $-3x + 8 + 15x = 32$

Write your summary for today's lesson. Also look back through your note what do you still need to work on?



Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question

EQ: How do I interpret parts of an expression?(A-SSE.1a)

Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question

Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-

Warm-up: Give examples of the following number types.

1) Natural Numbers $1, 2, 3 \ldots$

2) Irrational Numbers π $\sqrt{\frac{8}{90}}$

3) Whole Numbers $0, 1, 2, 3, \ldots$

4) Integers $-1, -2, 4, 5$

5) Rational Numbers $.5$ $\frac{1}{2}$ $\frac{1}{3}$ $.31$

week 6

Notes Notes

Parts of an Expression

A-SSE.1a

Vocabulary:

Term- includes numbers (numerical coefficients) and letters (variables). Terms are seperated by addition or Subtraction.

- Examples: $-12, -4x^2, 15x^7y^9, 5x^3, 4x^2y, -x^2, x$

Coefficient- a number followed by a variable. (number in front of the variable)

Like Terms- have the same variable(s) and the same degree for each variable.

- Examples: 2x, 3x, -6x

$5xy^5$ $10xy^5$

Polynomial- a mathematical expression involving a sum of terms in one or more degree multiplied by a Coefficient. Polynomial can be used to represent any number of terms. Polynomial is often used to represent more than 3 terms.

- **Monomial:** 1 term polynomial
  - Examples: $2x$ / $5x^{10}$ / $3x^3$
- **Binomial:** 2 term polynomial
  - Examples: $(2x^2+7x)$ / $(2x^{10}+3x)$
- **Trinomial:** 3 term polynomial
  - Examples: $(8x^4+9x^2+5)$ / $(4x^2-2x+1$

Degree of a Polynomial- The degree of a polynomial is the greatest of the degrees of its terms after it has been simplified. To find the degree of each term, add the exponents for each variable.

$10x^{20}+5x^{16}+2x$

Standard Form of a polynomial: terms are placed in order from highest degree to lowest degree

$2x^{40}+50x^{20}+5x^{$

$5x^{50}+2x^{40}+50x^{20}$

Summary:

week 6

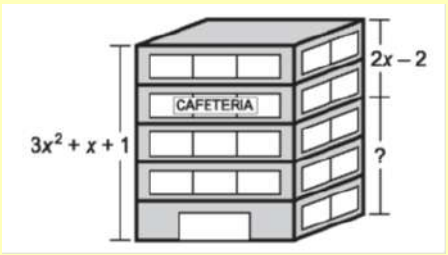
ICA:

Write the polynomial in standard form and classify:

1. $8x + 3 + 4x^2$ $4x^2+8x+3$ Trinomial
2. $10x - x^2$ $-x^2+10x$ binomial
3. $x - 3x^2 + 14 - 2x^3$ $-2x^3-3x^2+x+14$ Polynomial
4. $5x^3$ $5x^3$ monomial

5. Sarah made this model of an office building.

The expression $3x^2 + x + 1$ is the height of the building. The expression $2x - 2$ is the distance from the floor of the cafeteria to the top of the building.

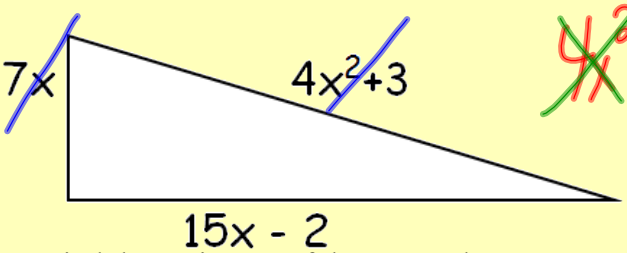


What is the expression for the height from the ground to the floor of the cafeteria?

$(3x^2+x+1)-(-2x+2)$

$3x^2-x+3$

6. Write an expression that represents the perimeter of this triangle.



$(7x)+(4x^2+3)+(15x-2)$

$4x^2+7x+15x-2+3$

$4x^2+22x+1$

7. Find the perimeter of the rectangle

Solve and Graph on a Number Line:

1. $4(2-x) < -8$

2. $18 \geq 3(2x-4)$

Solve. Justify all equations.

1. $3(2x+1) = 2x+15$

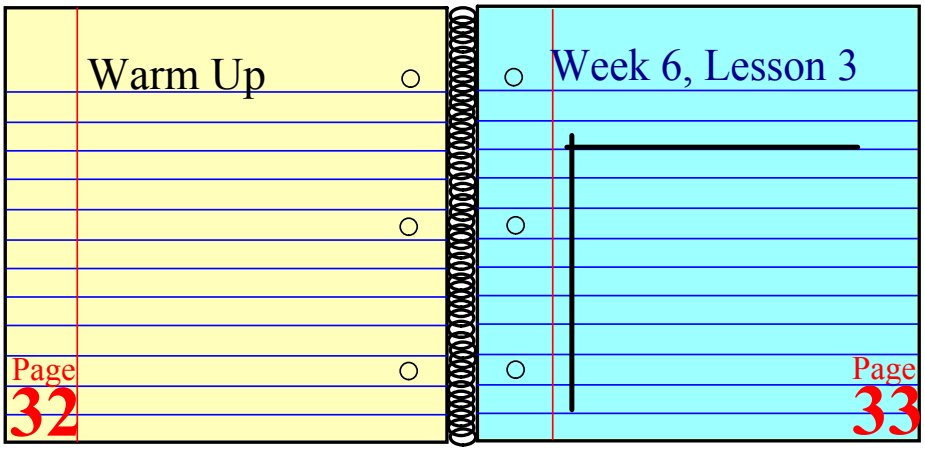
2. $9x+4-2x = 4(x+4)$

3. $20+100-10x = 2(5x-40)$

4. $\frac{1}{4}x + 20 = x$

5. $4\left(0.1+\frac{x}{8}\right) = 10$

6. $5x + x + 5x + x = 48$



Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question

EQ: Can I interpret parts of an expression ? (A-SSE.1a)

Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question

Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-

Warm-up: Define the following Words:

1) Term: $2x$, 12 , $3x^2$

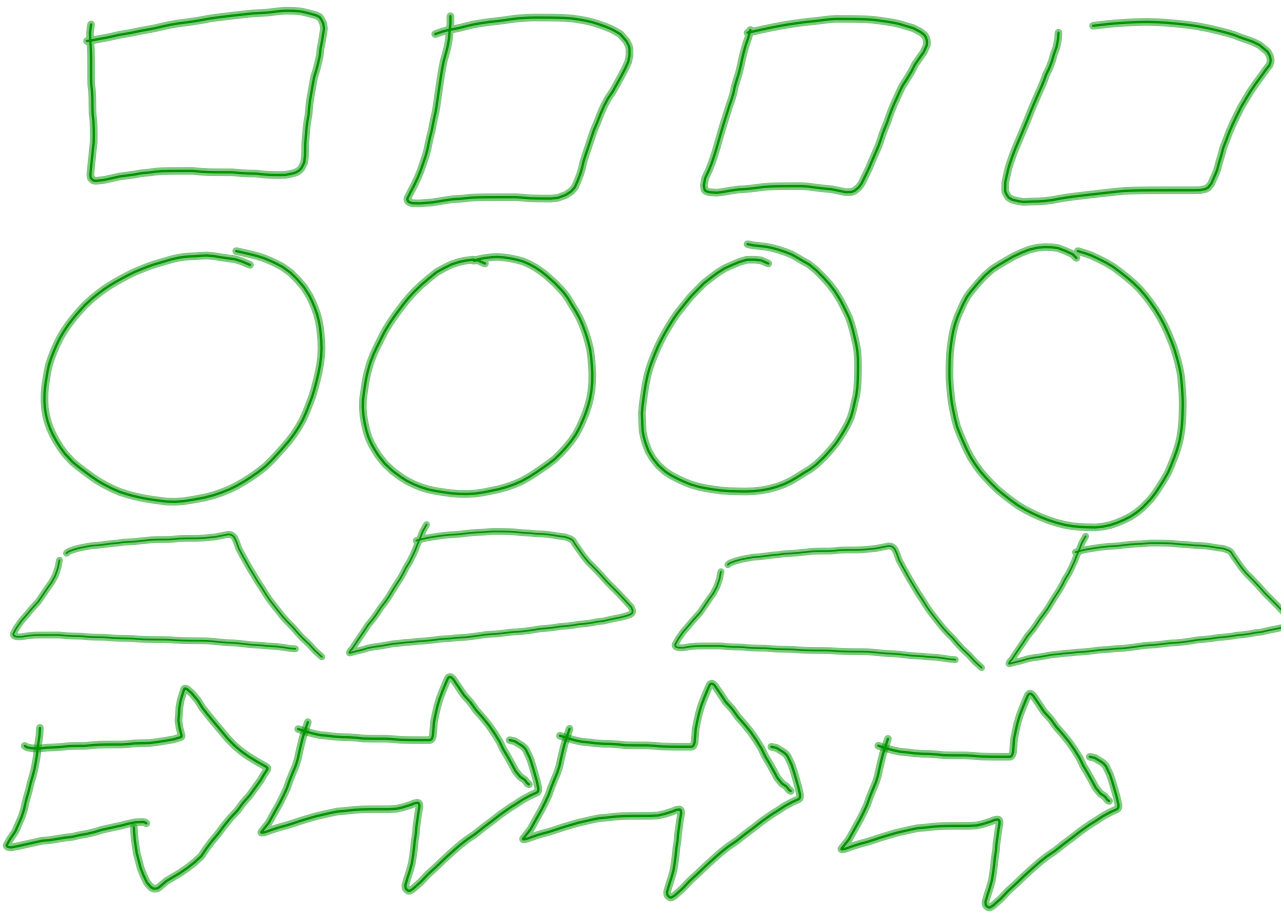
2) Binomial: $(2x+12)$, $(3x^2-15)$

3)Degree of a Polynomial:

$3x^{10}+3x^{20}+15x^2$

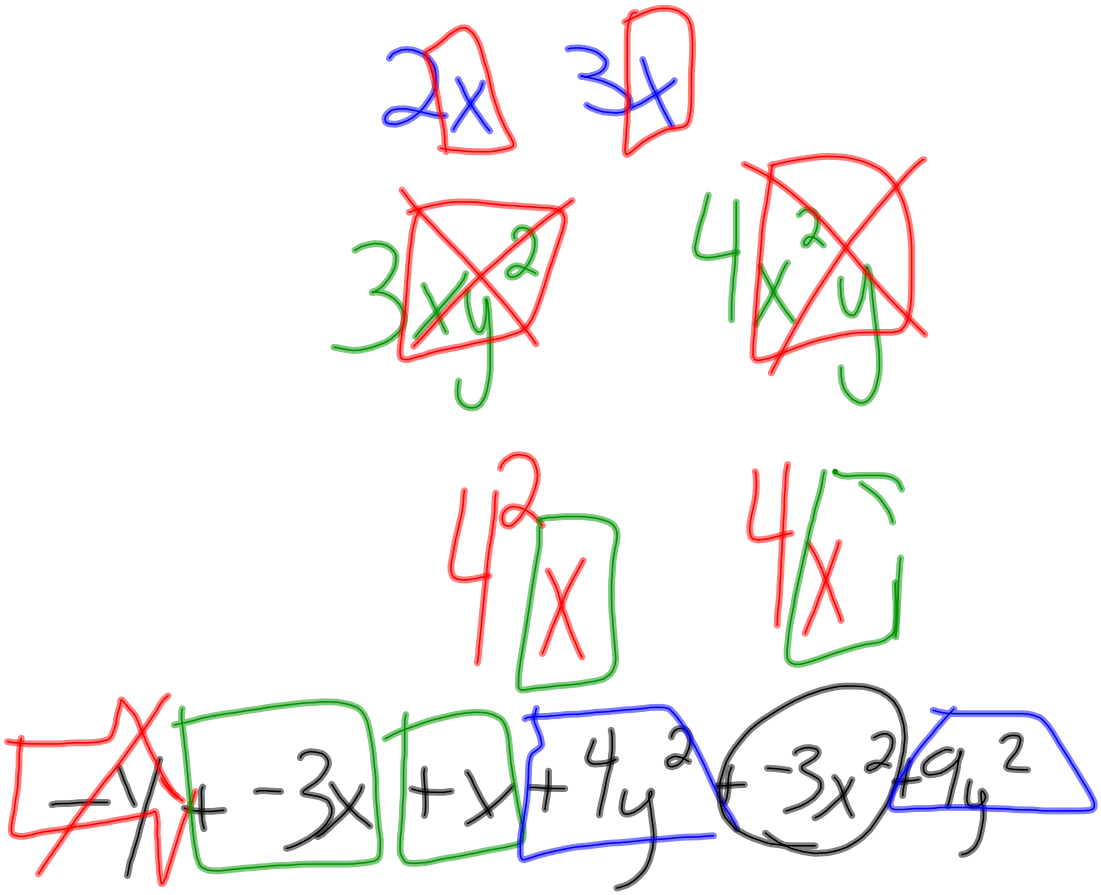
$3x^{20}+3x^{10}+15x^2$

week 6



+ or − terms

they must have Variables that are twins



$-y-2x+13y^2-3x^2$

$-3x^2-2x+13y^2-y$

$$3x^2 - 4y + 3x + 2y + 4y^2 + 6x$$

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

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

ICA:

Group Activity

Addicted to Addition

Day 2_Addition Addiction Cards.doc

Day 2_Addition Addiction Student Worksheet.doc

Look at the following data set: {4, 12, 9, 21, 18, 45, 6, 17}

1. Determine the outlier.

2. How does the outlier affect the mean?

What is the mean?

3. How does the outlier affect the median?

What is the median?

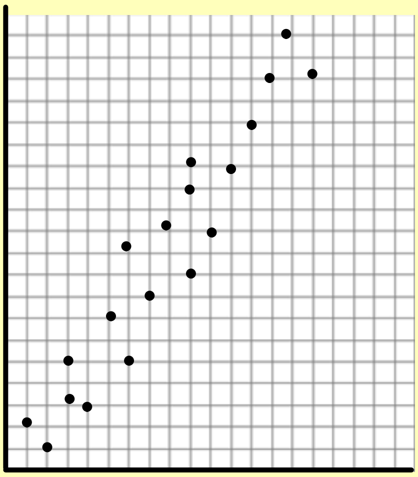
4. How does the outlier affect the standard deviation?

week 6

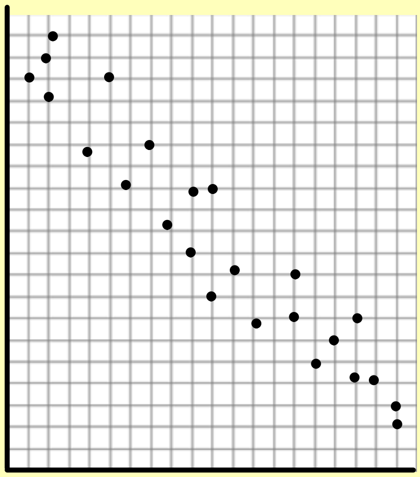
QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ QUIZ

What type of correlation is there?

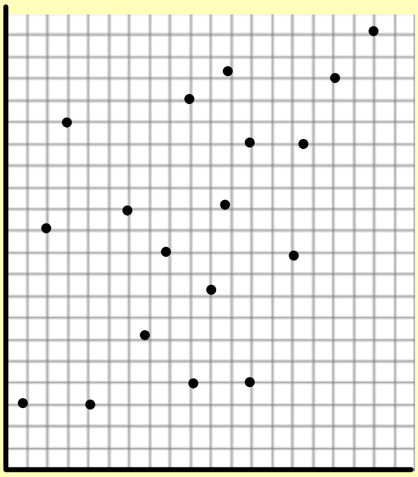
1)



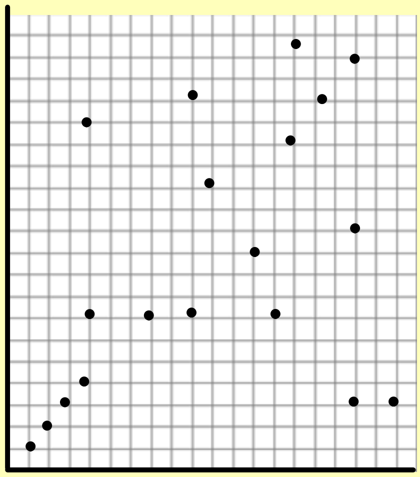
2)

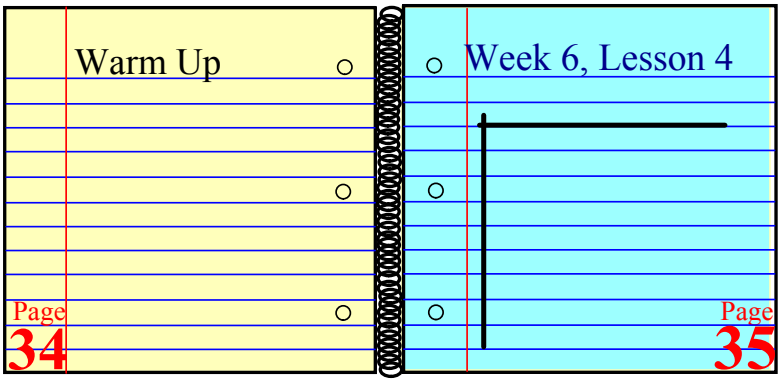


3)



4)





Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question

EQ: What do I have left to do in Unit 4 & what's coming up in Unit 5 Part 1?

Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question

Warm Up:

$$\left\{-2, \sqrt{9}, -6.4, \frac{5}{4}, \sqrt{2}, 0, \pi, 3, -5\right\}$$

r r r r I r I r r

1. Make 2 lists. One of all the rational numbers in the set above and one of all the irrational numbers.

2. How many terms are in the algebraic expression $8x + xy - 6y$?

3 trinomial

3. What is the coefficient of x in the algebraic expression $-x + 12$?

−1

4. $(8x^2z - 6xz) + (x^2z + 3xz - 2)$

$9x^2z - 3xz - 2$

ICA:

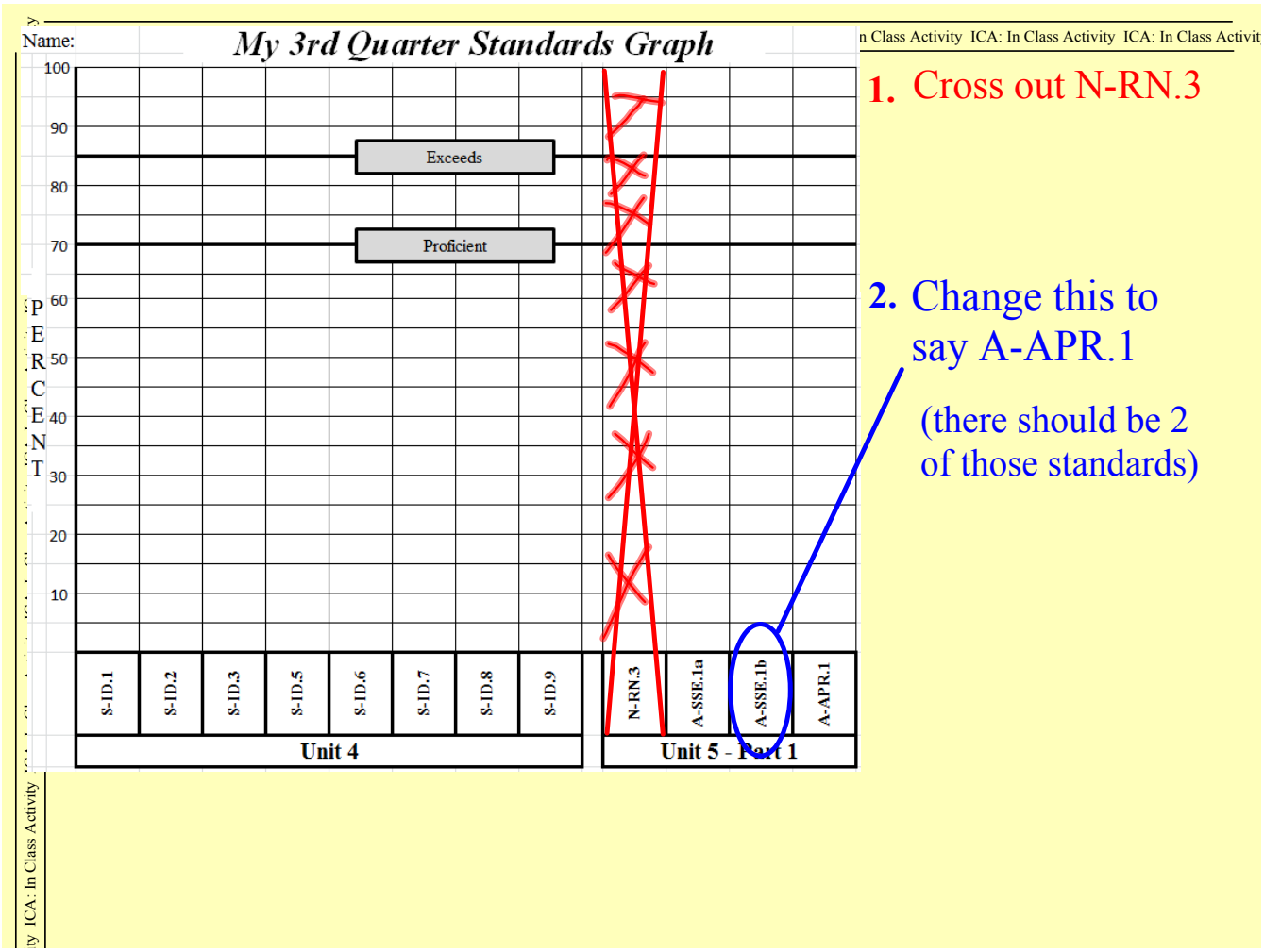
1. Update Grade graphs for Unit 4.

2. Write down the standards that you still need to improve. Page 349

3. Write down how you will fix those scores. Be specific.

4. Write down how you will fix those scores. Be specific.

week 6


Name:
My 3rd Quarter Standards Graph
n Class Activity ICA: In Class Activity ICA: In Class Activit
PERCENT
100
90
80
70
60
50
40
30
20
10
Exceeds
Proficient
S-ID.1
S-ID.2
S-ID.3
S-ID.5
S-ID.6
S-ID.7
S-ID.8
S-ID.9
N-RN.3
A-SSE.1a
A-SSE.1b
A-APR.1
Unit 4
Unit 5 - Part 1
1. Cross out N-RN.3
2. Change this to say A-APR.1
(there should be 2 of those standards)

week 6

ICA: In Class Activity ICA: In Class Activity ICA: In Class Activity ICA: In Class Activity ICA: In Class Activity ICA: In Class Activity ICA: In Class Activity ICA: In Class Activity

ICA:

Page 35

ALG 2 - Unit 5 Part 1 Review.doc

Pull

Student Self Assessment
ALG 2 - Unit 5 Part 1: Polynomials

Name: _____
Period: _____

Am I ready for the test?		Checkpoint Quiz			Tutoring Action Plan	Post-Test							
		Readiness Check: How well do I know it?				Level of Accuracy: What were my scores?			Level of Mastery				
Standards	Learning Target (I can...)	Points Earned	Percent	Tutoring Y or N? Circle 1	Teacher Initials after tutoring	Questions on Test	Points Earned	Percent	Exceeds 85 - 100%	Proficient 70 - 84%	Approaches 55 - 69%	Some Evidence 1 - 54%	No Evidence 0%
A-SSE.1a	I can interpret parts of an expression.	☐/10		Yes 0-69% No 70-100%	Date: Initials:	1 - 5	☐/10		10	8	6	5	0
A-APR.1	I can add and subtract polynomials.	☐/20		Yes 0-69% No 70-100%	Date: Initials:	6 - 10	☐/20		10	8	6	5	0
A-APR.1	I can multiply polynomials.	☐/29		Yes 0-69% No 70-100%	Date: Initials:	11 - 15	☐/29		10	8	6	5	0

ICA:

1. What operation always joins a variable and its coefficient in an algebraic expression?

2. Classify each of the following as a monomial, binomial or a trinomial.

a. $x+1$

b. $5-x^2$

c. x^2-x-1

d. $2x$

3. Explain the meaning of the exponent 2 in the algebraic expression $(3x+y)^2$.

4. Describe the error Kate made when simplifying the expression shown. $2(5x+6)=10x+6$

Attachments

Day 2_Addition Addiction Student Worksheet.doc

Day 2_Addition Addiction ANSWER Key.doc

Day 2_Addition Addiction Cards.doc

ALG 2 - Unit 5 Part 1 Review.doc