Name _____ Date _____ Pd __

CYU 1.1 – 1.4 Quiz Review

☑ *Use when you get it right all by yourself*

S *Use when you did it all by yourself, but made a silly mistake*

H *Use when you could do it alone with a little help from teacher or peer*

G *Use when you completed the problem in a group*

X *Use when a question was attempted but wrong (get help)*

N *Use when a question was not even attempted*

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Inequalities		14 - 18	39 - 45
Translating words into mathematical sentences		19 - 36	37 - 38
Integers	13	14 - 18	
Absolute Value, Opposite Number, + - #	1 – 8	9 - 12	39 - 45
Natural & Whole Numbers	13		
Real numbers	13		
Rational & Irrational Numbers	13		
Simplest Form/Lowest Terms	46 - 54		
Multiply Fractions/Divide Fractions		49 - 52	
Adding Fractions/Subtracting Fractions		46 - 48	53 - 54
LCD		46 - 48	53 - 54
Mixed Numbers/Improper Fractions			53 - 54
Evaluating exponent notation		55 – 60	
Order of Operations: PEMDAS		55 - 60	
Operation Symbols: +, -, ·, ÷	55 - 60		
Evaluating Expressions		61 - 66	
Solution/Answer			37 - 38

Name Key Date _____ Pd _____

Quiz Review 1.2 – 1.4

Answer the following with positive, negative, or 0.

1) The opposite of a positive number is a negative number.
2) The sum of two negative numbers is a negative number.
3) The absolute value of a negative number is a positive number.
4) The absolute value of zero is 0.
5) The reciprocal of a positive number is a positive number.
6) The sum of a number and its opposite is 0.
7) The absolute value of a positive number is a positive number.
8) The opposite of a negative number is a positive number.

Fill in the chart.

Problem	Number	Opposite	Absolute Value
9)	$\frac{1}{7}$	$-\frac{1}{7}$	$\left\|\frac{1}{7}\right\| = \left\|-\frac{1}{7}\right\| = \frac{1}{7}$
10)	$-\frac{12}{5}$	$\frac{12}{5}$	$\left\|-\frac{12}{5}\right\| = \left\|\frac{12}{5}\right\| = \frac{12}{5}$
11)	3	-3	$\|3\| = \|-3\| = 3$
12)	$-\frac{9}{11}$	$\frac{9}{11}$	$\left\|-\frac{9}{11}\right\| = \left\|\frac{9}{11}\right\| = \frac{9}{11}$

Know the definitions of each type of number category. Then place the bank of numbers into the best most specific location.

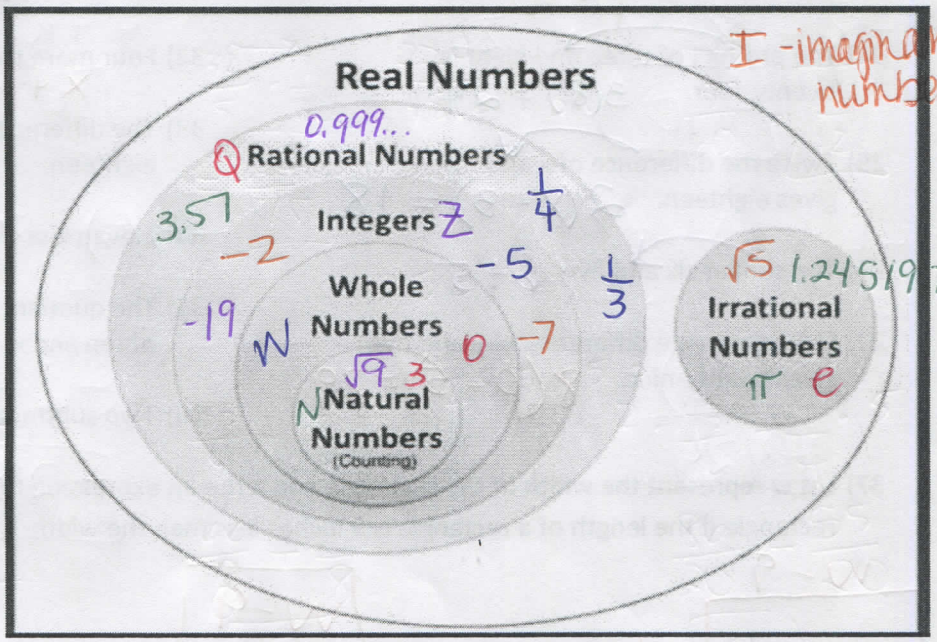
π $\frac{1}{4}$ $\sqrt{9}$ 0

-2 3.57 -5 0.999....

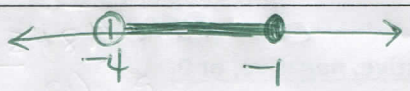
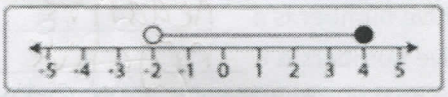
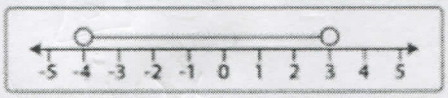
3 $\sqrt{5}$ 1.24519764 ...

$\frac{1}{3}$ -19 e -7

$\mathbb{N}$ $\mathbb{W}$ $\mathbb{Z}$ $\mathbb{Q}$ $\mathbb{I}$



Fill in the chart below.

Problem	Inequality	Number Line	Integers Included
14)	$-4 < x \leq -1$ $(-4, -1]$		$-3, -2, -1$
15)	$-2 < x \leq 4$ $(-2, 4]$		$-1, 0, 1, 2, 3, 4$
16) answers vary	$-4 \leq x < 6$ $[-4, 6)$		-4, -3, -2, -1, 0, 1, 2, 3, 4, 5
17)	$0 \leq x < 3$ $[0, 3)$		$0, 1, 2,$
18)	$-4 < x < 3$ $(-4, 3)$		$-3, -2, -1, 0, 1, 2$

Translating Sentences, Expressions, & Statements.

19) The sum of six and nine is fifteen. $6 + 9 = 15$

20) The quotient of three and seven $\frac{3}{7}$

21) The sum of two and eight gives ten. $2 + 8 = 10$

22) The product of eight and seven is fifty-six. $8(7) = 56$

23) Ten less than p $p - 10$

24) The product of three and eight is twenty-four. $3(8) = 24$

25) Twice the difference of x and three gives eighteen. $2(x - 3) = 18$

26) The sum of six and five $6 + 5$

27) Eight times the difference of p and five gives twenty-nine. $8(p - 5) = 29$

28) Six times the difference of b and g $6(b - g)$

29) Nine times the sum of d and three gives twenty-five. $9(d + 3) = 25$

30) Three more than x is equal to forty-seven. $x + 3 = 47$

31) The difference of ten times b and g $10b - g$

32) Four more than x is equal to twelve. $x + 4 = 12$

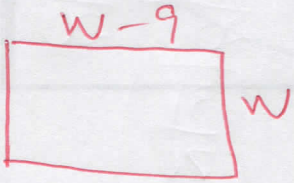
33) The difference of y and fourteen is eighteen. $y - 14 = 18$

34) Eleven less than x is equal to thirty. $x - 11 = 30$

35) The quotient of three and the product of ten and x $\frac{3}{10x}$

36) Two subtracted from six $6 - 2$

37) Let w represent the width of the rectangle and write an expression for the length of the rectangle if the length of a rectangle is 9 inches less than the width.



w - 9

38) Salvador has dimes and quarters in his pocket. The number of dimes is nine less than thirteen times the number of quarters. Let q represent the number of quarters, and write an expression for the number of dimes. $d = 13q - 9$

$\boxed{13q - 9}$

Absolute Value: Simplify the first four and fill in the last three with the correct inequality symbol.

39) $|(-3)(6)|$

$|-18|$

$\boxed{18}$

40) $-|5-2|$

$-|3|$

$\boxed{-3}$

41) $-2|2-5|$

$-2|-3|$

$-2(3) = \boxed{-6}$

42) $-|-12|$

$-|12|$

$\boxed{-12}$

43) $|-3| \_\_ |-5|$

$3 < 5$

44) $|2-7| \_\_ |5(-3)|$

$|-5| \quad |-15|$

$5 < 15$

45) $-|5-9| \_\_ |-6| \div |-2|$

$-|-4| \quad 6 \div 2$

$-4 \quad 3$

Fractions: Perform the indicated operation in proper order and write your final answer in simplest form. Show all your work to earn full credit.

46) $5\frac{1}{3} - 7\frac{6}{7} + 3\frac{7}{8}$

(96) (24) (21)

$\frac{16}{3} - \frac{55}{7} + \frac{31}{8}$

$\frac{896}{168} - \frac{1320}{168} + \frac{651}{168}$

$= \boxed{\frac{227}{168}}$

47) $13\frac{1}{4} - 3\frac{3}{8} - 4\frac{2}{10}$

(20) (8) (8)

$\frac{53}{4} - \frac{27}{8} - \frac{42}{10}$

$\frac{1060}{80} - \frac{270}{80} - \frac{336}{80}$

$= \frac{454}{80} \div 2 = \boxed{\frac{227}{40}}$

48) $8\frac{2}{6} - 3\frac{3}{5} - 2\frac{1}{12}$

(10) (12) (5)

$\frac{50}{6} - \frac{18}{5} - \frac{25}{12}$

$\frac{500}{60} - \frac{216}{60} - \frac{125}{60}$

$= \frac{159}{60} \div 3 = \boxed{\frac{53}{20}}$

49) $1\frac{3}{4} \div \frac{3}{8}$

$\frac{7}{4} \div \frac{3}{8}$ KCF

$\frac{7}{1\cancel{4}} \cdot \frac{\cancel{8}^{2}}{3} = \boxed{\frac{14}{3}}$

50) $6\frac{2}{5} \cdot \frac{7}{30}$

$\frac{32}{5} \cdot \frac{7}{30} = \frac{224}{150}$

$= \boxed{\frac{112}{75}}$

51) $\frac{1}{5} \cdot \frac{5}{12}$

$\frac{5}{60} = \boxed{\frac{1}{12}}$

52) $6\frac{3}{14} \div \frac{1}{7}$

$\frac{87}{14} \div \frac{1}{7}$ KCF

$\frac{87}{14} \cdot \frac{7}{1} = \frac{609}{14}$

$= \boxed{\frac{87}{2}}$

53) $7\frac{5}{4} + 6\frac{1}{8}$

$2 \cdot \frac{33}{4} + \frac{49}{8}$

$\frac{66}{8} + \frac{49}{8}$

$\boxed{\frac{115}{8}}$

54) $4\frac{3}{10} - 2\frac{3}{4}$

$2 \cdot \frac{43}{10} - \frac{11}{4} \cdot 5$

$\frac{86}{20} - \frac{55}{20}$

$\boxed{\frac{31}{20}}$

Exponents & Order of Operations PEMDAS

Check using your calculator

55) $(52-2)\div 2+6^2$

$50\div 2+6^2$

$50\div 2+36$

$25+36$

61

56) $(5\cdot 2+9^2)+9$

$(5\cdot 2+81)+9$

$(10+81)+9$

$91+9$

100

57) $(37-3^2)\div(20-6)$

$(37-9)\div(20-6)$

$28\div 14$

2

58) $\{(3)(2)+5^2\}-9$

$\{(3)(2)+25\}-9$

$\{6+25\}-9$

$31-9$

22

59) $(73-5^2)\div(31-7)$

$(73-25)\div(31-7)$

$48\div 24$

2

60) $(6+4)^2+(20\div 5)$

$(10)^2+(4)$

$100+4$

104

Evaluate the Expressions Show work!

61) If r = 27 and d = 2: $3-\frac{r}{9}-8d$

$3-\frac{27}{9}-8(2)$

$3-3-16$

$0-16$

-16

62) If f = 2 and w = 4: $8f-7+2w$

$8(2)-7+2(4)$

$16-7+8$

$9+8$

17

63) $-8-9z+4+3n$ if z = 2 and n = 4

$-8-9(2)+4+3(4)$

$-8-18+4+12$

-10

64) $d+2n$ if d = 4 and n = 5

$4+2(5)$

$4+10$

14

65) $-4(9b+5w)$ if w = 5 and b = 9

$-4(9(9)+5(5))$

$-4(81+25)$

$-4(106)$

-424

66) $-3h-8(9s-2)$ if s = 4 and h = 5

$-3(5)-8(9(4)-2)$

$-15-8(36-2)$

$-15-8(34)$

$-15-272$

-287

Things to study for this quiz include:

- Notes
- Homework
- Concept Checks
- Vocab Checks