Name (print)_____

Directions

1. Time limit: 1 hour 50 minutes.   Each test should have 7 **pages**.

2. To receive credit on any problem, you must **<u>show work</u>** that explains how you obtained your answer or you must explain how you obtained your answer.

3. Write your work in ***pencil*** in the provided spaces. Your work must be neat, organized, and legible. Place answers on the line to the right of the problem.

4. You may use a calculator, but you may not use any notes, books or other sources. You can not share a calculator with another student.   You may *not use a cell phone, PDA, etc.* ***** Work must be shown.

5. If a problem does not specify that an answer be written in fraction notation, mixed number notation, or decimal notation, then write the answer in the notation that you think is most appropriate for the problem. ***All numerical fractions must be expressed in lowest terms.***

6. You are expected to do your own work. You are neither to receive nor to give any help on the exam.

7. Please write your name on the first and second pages.

I have read the directions.

Signature_____

Final Exam

Answers:

Simplify:

1) $-2\frac{5}{6}-(-5\frac{1}{2})$

1)_____
(3 points)

2) $(2.1-0.5)^2 \div 0.4$

2)_____
(3 points)

3) $\dfrac{\dfrac{1}{6}-\dfrac{2}{3}}{4}$

3)_____
(3 points)

4) $\dfrac{3}{4}-3.06+1\dfrac{1}{5}$

4)_____
(3 points)

5) 8^0

5)_____
(1 points)

6) Change to a decimal form rounded to the nearest thousandth:

$\dfrac{8}{7}$

6)_____
(2 points)

7) Change to percent :

0.076

7)_____
(2 points)

8) Change to a fraction and simplify :

16%

8)_____
(2 points)

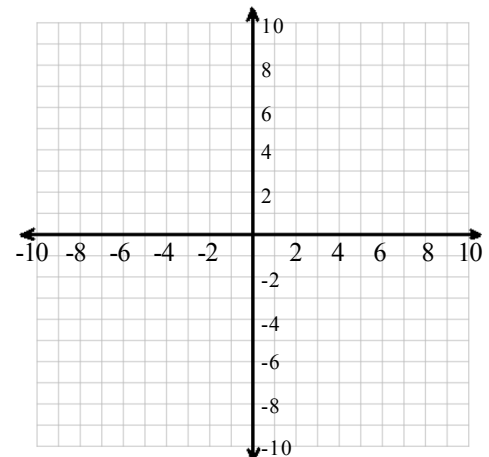9)Solve :

21.51 is what percent of 47.8?

9)_____
(3 points)

10) Find the quotient to the nearest hundredth :

$9.4 \div 65.7$

10)_____
(2 points)

11)
(4 points)

11) Fill in the table and graph the equation : $2x - y = 6$

x	y
2	
-1	
	-4
0	

Solve:

12) $4.3x = 9.1x + 1.92$

12)_____
(3 points)

13) $\dfrac{3}{4}x - \dfrac{1}{3} = \dfrac{5}{4}$

13)_____
(4 points)

14) $4(x-8) = -3x - 4$

14)_____
(4 points)

15) $\dfrac{x}{9} = \dfrac{15}{18}$

15)_____
(3 points)

16) Combine like terms:

$2a^2b - 4a^2 - 15a^2b + 4ab$

16)_____
(2 points)

Perform the indicated operations and simplify:

17) $-2x^2(7x^2 - 3x - 6)$

17)_____
(3 points)

18) $(13x^2 - 4x - 8) - (2x^2 - x + 6)$

18)_____
(3 points)

19) $(3x - 7)(4x + 3)$

19)_____
(3 points)

20) $(x - 4)^2$

20)_____
(3 points)

21) Write with a positive exponent : $\dfrac{1}{x^{-5}}$

21)_____
(2 point)

Choose the letter that corresponds to the correct property:
(Questions 22 & 23)
A) Distributive Property
B) Commutative Property of Addition
C) Associative Property of Addition
D) Identity Property for Addition
E) Inverse Property for Addition

22) $x+(y+z)=(x+y)+z$

23) $3(x-y)=3x-3y$

24) Evaluate:
   $2x^2-1$, for $x=-3$

22)_____
(1 point)

23)_____
(1 point)

24)_____
(3 points)

25)Find the average of the set of integers:
   $-10,-20,15,7$

25)_____
(3 points)

26) Write an algebraic expression described by the English Phrase:
3 times the sum of a number and 4

26)_____
(3 points)

27)Find the prime factorization :
   150

27)_____
(2 points)

28)Fill in the missing value :
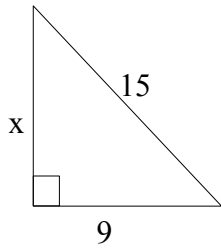 $8 \text{ m}^2=$_____ cm^2

28)_____
(2 points)

29) A camera is on sale for 40% off. The discount on the camera is $72. Find the original price of the camera.

29)_____
(4 points)

30) A savings account of $10,000 is earning 2.1% simple interest. How much interest will be earned in 6 months?

30)_____
(4 points)

31) 8 less than a number is equal to 5 times the number. What is the number?

31)_____
(4 points)

32) The sum of three consecutive odd integers is 315. Find the three integers

32)_____
(4 points)

33) Find the length of the third side of the triangle: 33)_____
(3 points)

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      /|
     / |
   15  |
   /   |
  x    |
  /    |
 |___  |
 |_|___|
   9
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34) Find the LCM: $12x^2 y$, $18x^4 y^3$ 34)_____
(2 points)

35) Find the area of a circle with radius 3 cm   35)_____
(3 points)

36) Angle 1 and 2 are complementary. If the measure of angle 1 is   36)_____
$22°$, find the measure of angle 2.   (2 points)