Pre-Algebra: Chapter 5 Review

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_

YOU WILL NOT BE GIVEN A CALCULATOR FOR ANY PORTION OF THE TEST.

To which number set(s) do the following numbers belong? Name all that apply. (No partial credit will be given during the test.)

(Natural, Whole, Integers, Rational, Irrational, Real)

1. $-\sqrt{121}$ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. $0$ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. $\sqrt{50}$\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. $2.18$ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. $210$ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. $7\frac{5}{8}$ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Show that the number is rational by writing it as a quotient of two integers. (Hint- write it as a fraction!)

7. 1.25 8. $-3\frac{1}{5}$ 9. 16

Write the fraction or mixed number as a decimal.

10. $\frac{13}{3}$ 11. $-\frac{7}{8}$ 12. $11\frac{2}{5}$

Write the decimal as a fraction or mixed number in lowest terms.

13. $5.875$ 14$. -0.55$ 15. $-3.015$

Find the sum or difference.

16. $-\frac{5}{9}-\left(-\frac{4}{9}\right)$ 17. $-\frac{7}{11}- \frac{5}{11}+ \frac{4}{11}$

18. $5\frac{2}{13}+ \left(-3\frac{6}{13}\right)$

Find the sum or difference.

19. $-\frac{7}{18}+ \left(-\frac{7}{12}\right) $ 20. $9\frac{1}{10}+ \left(-7\frac{3}{5}\right)$

21. $\frac{2}{7}-\frac{7}{8}$ 22. $-4\frac{2}{3}- \left(-6\frac{1}{12}\right)$

23. $2\frac{1}{4}-3\frac{2}{9}+ \frac{11}{12}$ 24. $-5\frac{7}{12}- \left(-\frac{2}{5}\right)+3\frac{2}{3}$

Find the product or quotient.

25. $-\frac{4}{5} ∙ \frac{3}{16}$ 26. $15\left(-\frac{6}{25}\right)$

27. $-1\frac{1}{4} ∙ \left(5\frac{1}{5}\right)$ 28. $-\frac{5}{6}÷ \left(-\frac{10}{19}\right)$

29. $-3\frac{3}{4}÷\left(-6\frac{7}{8}\right)$ 30. $1\frac{5}{11} ÷ 1\frac{5}{7}$

Evaluate the expression.

31. $\frac{3}{10} ∙\frac{3}{4} ∙2\frac{1}{2}$ 32. $1+ \frac{1}{2} ∙\left(-\frac{5}{8}\right)$

33. $-1\frac{3}{8}- \frac{2}{5} ÷3\frac{1}{6}$

Solve the following equations.

34. $-\frac{2}{3}y= 4$ 35. $-\frac{13}{20}p= -\frac{1}{5}$

36. $\frac{6}{13}k-3=9$ 37. $\frac{5}{11}=\frac{6}{11}x-1\frac{8}{11}$

Use the following formulas to answer questions 38-41. Round your answer to the nearest whole number if necessary. (REMEMBER- You will NOT be given a calculator during the test. Practice these WITHOUT A CALCULATOR!)

$℃= \frac{5}{9}(℉-32)$ $℉= \frac{9}{5}℃+32$

38. Convert $14℉ $to $℃.$ 39. Convert $200℃$ to $℉.$

40. Convert $-35℃$ to $℉.$ 41. Convert $59℉$ to $℃.$

Write and solve an equation to model the word problem shown below.

42. There are 4 activities to choose from at a summer camp. Children in the camp are allowed to sign up for one activity each day. On the first day, $\frac{1}{5}$ of the students signed up for swimming, $\frac{3}{8}$ decided to do kayaking, $\frac{3}{10}$ chose to climb the rock wall, and the remaining students selected arts and crafts. What fraction of the students chose arts and crafts? Show all work.

43. Explain your work for problem #42. Be sure to include your reasoning for each step in the problem-solving process.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Convert the following repeating decimals to fractions.

44. $0.\overbar{35}$ 45. $3.\overbar{198}$ 46. $-1.\overbar{63}$

Simplify the following expressions.

47. $-\frac{16p}{13}-\frac{7p}{13}$ 48. $\frac{8n}{15}+ \frac{6n}{10}$

49. $-\frac{6xy^{2}}{5} ∙ \frac{8x^{3}}{9}$