PRE-ALGEBRA TEST 2

Name_____ Date_____

Directions: Complete as many problems as you can in the 30 minutes allotted to you. No calculators!

1. Which is not an equivalent fraction?

(**A**) $\frac{21}{35}$ (**B**) $\frac{36}{60}$ (**C**) $\frac{33}{55}$ (**D**) $\frac{45}{80}$ (**E**) $\frac{42}{70}$

2. Write 2.5 % as a fraction.

(**A**) $\frac{1}{40}$ (**B**) $\frac{1}{42}$ (**C**) $\frac{1}{44}$ (**D**) $\frac{1}{46}$ (**E**) $\frac{1}{400}$

3. What number does $(5\times 10{,}000)+(0\times 1{,}000)+(7\times 100)+(0\times 10)+(4\times 1)$ equal?

(**A**) 5,704 (**B**) 50,074 (**C**) 50,704 (**D**) 50,740 (**E**) 57,004

4. If you have a rope that is $16\frac{1}{7}$ feet long and you chop off $8\frac{1}{6}$ feet , how long is the rope?

(**A**) $7\frac{1}{42}$ (**B**) $7\frac{41}{42}$ (**C**) 8 (**D**) $8\frac{1}{42}$ (**E**) $8\frac{41}{42}$

5. Which will produce the largest quotient?

(**A**) $6\frac{7}{13}\div 3\frac{7}{12}$ (**B**) $6\frac{7}{13}\div 3\frac{5}{12}$ (**C**) $6\frac{7}{13}\div 3\frac{11}{12}$ (**D**) $6\frac{7}{13}\div 3\frac{1}{12}$ (**E**) $6\frac{7}{13}\div 3\frac{1}{13}$

6. Which set of fractions are decreasing in value from left to right?

(**A**) $\frac{5}{21},\frac{11}{42},\frac{3}{14}$ (**B**) $\frac{3}{14},\frac{11}{42},\frac{5}{21}$ (**C**) $\frac{3}{14},\frac{5}{21},\frac{11}{42}$ (**D**) $\frac{11}{42},\frac{5}{21},\frac{3}{14}$ (**E**) $\frac{11}{42},\frac{3}{14},\frac{5}{21}$

7. Which has the smallest sum?

(**A**) $569\frac{5}{17}+789\frac{7}{17}$ (**B**) $569\frac{8}{17}+789\frac{3}{17}$ (**C**) $569\frac{3}{17}+789\frac{12}{17}$ (**D**) $569\frac{7}{17}+789\frac{7}{17}$ (**E**) $569\frac{4}{17}+789\frac{9}{17}$

8. After changing each mixed number to an improper fraction, which would produce an improper fraction that would have the largest numerator?

(**A**) $97\frac{14}{17}$ (**B**) $98\frac{11}{17}$ (**C**) $99\frac{8}{17}$ (**D**) $100\frac{5}{17}$ (**E**) $101\frac{2}{17}$

9. If you bought 13.2 gallons of gas at $2.05 per gallon, how much did you pay?

(**A**) $26.96 (**B**) $27.05 (**C**) $27.06 (**D**) $27.10 (**E**) $33.00

10. If $\frac{1}{6}$ of the dogs was white and $\frac{1}{5}$ was black, what fraction of the dogs was a different color?

(**A**) $\frac{2}{11}$ (**B**) $\frac{9}{11}$ (**C**) $\frac{9}{30}$ (**D**) $\frac{11}{30}$ (**E**) $\frac{19}{30}$

11. Which fraction is equivalent to 174.1875?

(**A**) $174\frac{3}{16}$ (**B**) $174\frac{5}{32}$ (**C**) $174\frac{11}{48}$ (**D**) $174\frac{1}{8}$ (**E**) $174\frac{4}{25}$

12. After changing each improper fraction to a mixed number which contains a reduced proper fraction, which fraction will have the largest numerator?

(**A**) $\frac{5375}{78}$ (**B**) $\frac{5377}{78}$ (**C**) $\frac{5379}{78}$ (**D**) $\frac{5381}{78}$ (**E**) $\frac{5383}{78}$

13. If you have not received $\frac{3}{10}$ of the \$24 that you earned, how much money have you received?

(**A**) \$7.20 (**B**) \$7.40 (**C**) \$16.80 (**D**) \$17.20 (**E**) \$17.60

14. If a circle has a diameter of $5+h$, what will the length of the radius be?

(**A**) $2\times(5+h)$ (**B**) $\frac{5+h}{2}$ (**C**) $2+(5+h)$ (**D**) $2\times\pi\times(5+h)$ (**E**) $\pi\times(5+h)$

15. If M is the midpoint of $\overline{\text{LN}}$ and the coordinate of N is 27 and the coordinate of M is 15, find the sum of the coordinates of L and M.

(**A**) 15 (**B**) 18 (**C**) 21 (**D**) 27 (**E**) 30

16. Which pair of numbers has the least GCF?

(**A**) 12 and 18 (**B**) 16 and 24 (**C**) 28 and 42 (**D**) 56 and 62 (**E**) 90 and 93

17. Which pair of numbers has the greatest LCM?

(**A**) 6 and 8 (**B**) 9 and 12 (**C**) 25 and 28 (**D**) 30 and 50 (**E**) 200 and 400

18. If a number is multiplied by $2\frac{3}{4}$ and the product is $5\frac{1}{2}$, find the number.

(**A**) 2 (**B**) $2\frac{1}{8}$ (**C**) $\frac{1}{2}$ (**D**) $1\frac{3}{4}$ (**E**) $2\frac{1}{4}$

19. Find the value of $\frac{(243+6)+(253-4)+(248+1)+(260-11)}{4}$.

(**A**) 248 (**B**) 248.5 (**C**) 249 (**D**) 249.5 (**E**) 250

20. A certain high school has 247 students that drive to school. There are 379 student parking places and 19 students are absent for the day. If 48 of the parking places are filled with nonstudent vehicles, how many parking places are currently empty?

(**A**) 103 (**B**) 75 (**C**) 161 (**D**) 65 (**E**) 199

21. Which is the smallest fraction?

(**A**) $-2\frac{1}{3}$ (**B**) $-2\frac{13}{36}$ (**C**) $-2\frac{5}{18}$ (**D**) $-2\frac{23}{72}$ (**E**) $-2\frac{7}{24}$

22. 140% of what number is 28?

(**A**) 0.05 (**B**) 5 (**C**) 20 (**D**) 39.2 (**E**) 200

23. What fraction of 80 is 32?

(**A**) $\frac{2}{5}$ (**B**) $\frac{5}{2}$ (**C**) $\frac{9}{20}$ (**D**) $\frac{11}{40}$ (**E**) $\frac{17}{40}$

24. 12 times the difference between a number and 7 can be written as

(**A**) $12(7\div n)$ (**B**) $12(n\div 7)$ (**C**) $12n+7$ (**D**) $12n-7$ (**E**) $12(n-7)$

25. Four times the sum of twice a number and eight is three less than the number can be written which of the following ways?

(**A**) $4(x^2+8)=x-3$ (**B**) $4(2x+8)=3-x$ (**C**) $4(x^2+8)=3-x$

(**D**) $4(2x+8)=x-3$ (**E**) $4(2+x+8)=x-3$

PRE-ALGEBRA TEST 2 ANSWERS

1. D	2. A	3. C	4. B	5. E
6. D	7. B	8. E	9. C	10. E
11. A	12. D	13. C	14. B	15. B
16. D	17. C	18. A	19. C	20. A
21. B	22. C	23. A	24. E	25. D

1. $\frac{45}{80}$ is the only choice that does not reduce to $\frac{3}{5}$

2. $2.5\% = 0.025 = \frac{25}{1000} = \frac{1}{40}$

3. 50,704

4. $16\frac{1}{7} - 8\frac{1}{6} = 15\frac{8}{7} - 8\frac{1}{6} = 15\frac{48}{42} - 8\frac{7}{42} = 7\frac{41}{42}$

5. All of the choices have the same dividend. Therefore the smallest divisor will produce the largest quotient, which is choice E.

6. $\frac{11}{42}, \frac{5}{21}, \frac{3}{14} \rightarrow \frac{11}{42}, \frac{10}{42}, \frac{9}{42}$ = choice D

7. Each choice has the same whole numbers and therefore only the fractions need to be observed. The denominators are all the same and can be ignored. Choice B adds up to 11 and will be the smallest.

8. Since the whole number increases by 1 for each choice, this will increase each choice by 17 from A to E. The numerators decrease by 3 from A to E. Therefore each choice has a net increase by 14 from A to E and E will be the largest.

9. $13.2 \times 2.05 = \$27.06$

10. $1 - \left(\frac{1}{6} + \frac{1}{5}\right) = 1 - \left(\frac{5}{30} + \frac{6}{30}\right) = \frac{30}{30} - \frac{11}{30} = \frac{19}{30}$

11. $0.1875 = \frac{1875}{10{,}000} = \frac{3}{16}$

12. Choice A will have a numerator of 71. Since each numerator increases by 2 from A to E, choice D will have a remainder of 77 and choice E will have a remainder of 79. 79 is larger than the denominator 78 which means another 78 can be taken out. Therefore E will have a remainder of 1.

13. $\frac{7}{10} \times 24 = \$16.80$

14. $\frac{5+h}{2}$

15. The distance from M to N is N - M = 27 - 15 = 12. Therefore the distance from L to M must be 12. The coordinate of L must be equal to 15 - 12 = 3. Therefore L + M = 3 + 15 = 18.

16. The GCF of 56 and 62 is 2 which is the least.

17. The LCM of 25 and 28 is 700 which will be the greatest LCM.

18. $5\frac{1}{2} \div 2\frac{3}{4} = \frac{11}{2} \cdot \frac{4}{11} = 2$

19. $\frac{249 + 249 + 249 + 249}{4} = \frac{4(249)}{4} = 249$

20. 379 spaces - 247 students = 132 empty spaces. 132 + 19 absent = 151 empty spaces. 151 - 48 = 103 empty spaces.

21. The smaller number always lies to the left on a number line. Change all fractions to a common denominator of 72 and the number farthest to the left on a number line will be $-2\frac{26}{72}$ which is B.

22. $n = \frac{28}{1.4} = 20$

23. $\frac{32 \div 16}{80 \div 16} = \frac{2}{5}$

24. $12(n-7)$

25. $4(2x+8) = x-3$