Grade Nine Mathematics Unit 3 – Rational Numbers Name: _____

1) What is the reciprocal of $\frac{-2}{3}$?

2) What is the opposite of $\frac{-2}{3}$?

3) List in order from greatest to least $\left\{-\frac{3}{4},\ 1\frac{3}{5},\ \frac{5}{8},\ \frac{-9}{4},\ 0\right\}$

4) What is the lowest common denominator between $\frac{1}{4}$ *and* $\frac{-4}{14}$?

5) Simplify: $\frac{2}{5}-\left(\frac{-1}{5}\right)$

6) Simplify: $2-\frac{4}{5}$

7) Divide: $-\frac{1}{7}\div\frac{5}{7}$

8) Multiply: $\left(\frac{1}{3}\right)\left(-\frac{3}{2}\right)$

9) Calculate: $\frac{56}{81}\times\frac{27}{64}$

10) Write: $-2\frac{1}{4}$ as an improper fraction

11) Simplify: $-\frac{5}{7}+\frac{1}{3}-\left(-\frac{2}{5}\right)$

12) Simplify: $\left(-\frac{2}{3}\div\frac{1}{4}\right)-\left(\frac{4}{5}\times\frac{1}{6}\right)$

13) Simplify: $\left(-1\frac{1}{4}\right)-\left(-2\frac{2}{3}\right)$

14) Simplify: $\left(-\frac{3}{5}\right)^2$

15) Multiply: (–2.72)(4.1)

16) Calculate: $6.1+\frac{-2}{5}\times 10-1$

17) Michael has $3\frac{1}{4}$ packages of paper to practice and study for his math exam.

If he uses $2\frac{3}{5}$ packages of paper, how much does he have left?

18) A room measures 3.2m by 2.7m, what is its area?

19) There are about 3.8 L of paint in a gallon. About how many litres are in $2\frac{1}{2}$ gallons?

20) Simplify: $\left(\frac{1}{2}-\frac{2}{3}\right)\times\left(\frac{2}{5}+\frac{1}{3}\right)$

21) Simplify: $(-2)^2\div 2(3-5)+4$

22) Simplify: $\left(\frac{1}{2}\right)\times\left(-\frac{2}{3}\right)^2$

23) Simplify: $\left(\frac{1}{2}\times\frac{-2}{3}\right)^2$

24) Simplify: $\frac{1}{2}-\frac{1}{2}\left(\frac{-2}{5}\div\frac{5}{10}\right)$

25) Simplify: $\frac{\frac{2}{3}+\frac{4}{5}}{\frac{4}{7}-2\frac{1}{3}}\times(-3)^2\div 2$

26) Simplify: $\frac{\frac{1}{2}+\frac{5}{8}}{-1\frac{2}{3}+\frac{5}{6}}\times(-2)\div 3$