Summer Math Practice – Algebra 1

This summer math worksheet is for all students _entering_ a high school level Algebra 1 class. Work the following problems over the summer. <u>Be sure to show ALL your work neatly on a separate sheet of paper</u>. Your teacher will ask for this in August for a grade. <u>NO Calculators should be used on this worksheet</u>.

Set 1

1. $3\frac{1}{2} + 5\frac{2}{3}$
2. $4.6 - 3.98$
3. $-3 \bullet 4 + 6 - 4 \div 2$
4. Evaluate: $-5|k+1|$ when $k=-11$
5. Simplify: $\frac{36}{40}$
6. Solve: $\frac{n}{6} = \frac{3}{8}$
7. Write $\frac{7}{8}$ as a percent
8. Solve: $85 + a = 150$
9. Solve: $6x + 8 = 50$
10. Find the GCF and LCM of 15 and 60
11. Find the prime factorization of 84
12. Estimate to the nearest whole number $3\frac{1}{5} + 9\frac{9}{10}$
13. Find the perimeter & area of a square with sides of 3.4 inches.
14. Write an algebraic expression for: "the sum of 32 and x"
15. What is 25% of 32?
16. Simplify: $\sqrt{9} + \sqrt{4}$
17. Simplify: $3 + 4(2+1)^2$
18. Solve: $-3 = \frac{n}{-6} + 9$
19. Place the following _Real_ numbers in order from least to greatest $\{\frac{1}{3}, \frac{1}{2}, 0.7, 0, -5, -2\}$
20. List the first four (non-zero) multiples of 5
21. 12,144 feet per minute is how many miles per hour?

Set 2

1. $8\frac{1}{3} - 4\frac{4}{5}$
2. $(4.23)(1.6)$
3. $6 + 18 \div (-3)$
4. Evaluate: $4v^3$ when $v = -5$
5. Simplify: $\frac{5}{30}$
6. Solve: $\frac{15}{10} = \frac{3}{k}$
7. Write $\frac{5}{6}$ as a decimal
8. Solve: $u - 18.4 = 39$
9. Solve: $\frac{d}{10} - 20 = 16$
10. Find the GCF and LCM of 16 and 36
11. Simplify: $2^3 \bullet 3 \bullet 5^2$
12. Estimate (to the nearest dollar): $\$7.91 - \$2.05$
13. Find the area and perimeter of a right triangle having legs of 3 cm and 4 cm and a hypotenuse of 5 cm
14. Write an algebraic expression for "the quotient of 5 and x"
15. 20% of what is 14 ?
16. Simplify: $\sqrt{49} - \sqrt{25}$
17. Simplify: $25 - 2(3)^2$
18. Solve: $\frac{x-6}{3} = -12$
19. Place the following Real numbers in order from least to greatest. $\{-\frac{3}{4}, \frac{-4}{3}, 1, \frac{3}{4}, 0\}$
20. What is the "rule" to see if a number is divisible by nine?
21. 4 gallons and 3 quarts is how many cups?

Set 3

1. Multiply: $1\frac{3}{7} \bullet 2\frac{4}{5}$
2. Divide: $27 \div 0.3$
3. Simplify: $\frac{5(6-2)}{2(4+3)}$
4. Simplify: $2^3 + |7-9|$
5. Simplify: $\frac{56}{84}$
6. At 60 mph a car travels 88 feet per second. How many feet per second does a car travel at 15 mph?
7. Write 60% as a fraction & decimal.
8. Solve: $\frac{4m}{5} = 30$
9. Solve: $5x - 1.5 = 0$
10. Find the GCF and LCM of 12 and 64
11. Write the prime factorization of 120
12. Estimate 39.46 to the nearest integer
13. Find the area and circumference of a circle with a diameter of 5 cm. (use $\pi \approx 3.14$)
14. Write an algebraic expression for "x subtracted from 8"
15. 6 is what percent of 4?
16. Simplify: $\frac{\sqrt{36}}{\sqrt{4}}$
17. Simplify: $3 + 9^2 \div 3$
18. Solve: $3n - 7 = -19$
19. Place the following Real numbers in order from least to greatest: $\{-1.2, 3.5, \frac{-4}{5}, \frac{1}{2}, -\frac{6}{3}\}$
20. How many factors does 24 have? List them.
21. 43,890 kilometers is how many centimeters?