Math 90 SAMPLE Test Chapter 2 & 3 NAME_____

No calculators allowed. Show your work where necessary to receive full credit. List your answers in the answer column. (The "actual exam" will have ample space provided to show your work.)

1. What part is shaded?

1. _____

2. _____

2. Simplify the fraction. $\frac{45}{300}$

3. **Find the prime factorization of 84.** 3._____

In #4 use = , < or > for ☐ to write a true statement.

4. $\frac{5}{8}$ ☐ $\frac{20}{24}$ 4. _____

Multiply and simplify:

5. $\frac{4}{5} \cdot \frac{10}{24}$ 5._____

Divide and simplify:

6. $\frac{9}{20} \div \frac{11}{20}$ 6. _____

Add and simplify:

7. $\frac{3}{7} + \frac{1}{2}$ 7. _____

Subtract and simplify:

8. $\frac{3}{10} - \frac{7}{100}$ 8. _____

9. Convert to **Fractional notation**: $5\frac{3}{10}$ 9. _____

10. Convert to a **Mixed Numeral:** $\frac{53}{5}$ 10. _____

In #11 - #14, perform the indicated operations and simplify:

11. $7\frac{5}{12} + 3\frac{1}{4}$ 11. _____

12. $20\frac{2}{5} - 9\frac{1}{2}$ 12. _____

13. $4\frac{3}{5} \cdot 1\frac{3}{7}$ 13. _____

14. $2\frac{1}{2} \div 20$ 14. _____

15. **Simplify:** $\frac{5}{12} + 2\frac{1}{4} \cdot 5\frac{1}{2}$ 15. _____

16. **Solve** : $\frac{3}{8} \cdot x = 6$ 16. _____

17. **Solve:** $m + \frac{12}{35} = \frac{23}{35}$ 17. _____

For word problems, clearly indicate your strategy (multiplication, division, addition or subtraction), show your work and write your answer in a complete sentence.

18. A new long-life tire has a tread depth of $\frac{3}{8}$ inch instead of a more typical tread depth of $\frac{11}{32}$. How much deeper is the new tread depth?

18. _____

19. It takes $1/4$ of a yard of material to make a place-mat. How many place-mats can be made from 2 yards of material? (You may assume that all of the material will be used.)

19. _____

20. A chicken casserole recipe calls for $2\frac{1}{2}$ cups of chicken. How much chicken is needed for 3 recipes?

20. _____