Simplify all answers and show your work!

1) What is a **common denominator** for \(\frac{3}{6} + \frac{5}{15}\) ? ____________

2) To multiply or divide mixed numbers, it's best to first change them into ________________ before trying to multiply or divide.

3) In the division problem \(\frac{2}{7} \div \frac{8}{11}\), what number represents the amount that we are starting with? _________

4) In order to add or subtract fractions/mixed numbers, they must have a common ________________

5) Add: \(\frac{4}{5} + \frac{2}{3}\) ____________

6) Subtract: \(-\frac{8}{6} - \frac{1}{3}\) ____________

7) Subtract: \(-\frac{7}{5} - \frac{3}{10}\) ____________

8) Simplify: \(\sqrt{\frac{25}{49}}\)

9) Multiply: \(\frac{24}{35} \cdot \frac{14}{15}\) ____________

10) Divide: \(\frac{8}{3} \div \frac{1}{2}\) ____________

11) Simplify: \(\frac{4}{5} \left(\frac{2}{3}\right)^2 + \frac{7}{9}\)

12) Write < or > to make a true statement: \(\frac{6}{10} \quad \frac{7}{12}\)

13) Subtract: \(\frac{11}{14} - \frac{4}{21}\)

14) A 15-foot board is cut into shelves that are \(\frac{3}{2}\) feet long. How many shelves at this length can be cut from the board?
15) A patient with high blood pressure is put on a diet with the goal of losing 25 pounds. If he loses $8\frac{1}{4}$ pounds the first month and $7\frac{1}{2}$ pounds the second month, how much more weight does he need to lose to reach his goal?

16) The average person walks at a rate of $3\frac{1}{2}$ miles per hour. How many miles can the average person walk in 3 hours?

17) A welder works $2\frac{1}{4}$ hours of overtime on Monday, $4\frac{3}{8}$ hours of overtime on Tuesday and $3\frac{2}{5}$ hours of overtime on Wednesday. How much overtime did he work during those three days?

18) Sarah bought $8\frac{7}{10}$ acres of land and donated $2\frac{1}{5}$ acres to the community for a park. She sold the rest of the land in lots of $\frac{1}{2}$ of an acre. How many lots were available for sale?

19) If 18 pounds of peas are packed in $\frac{2}{3}$-pound bags, how many bags are there altogether?

20) If it rains an average of $6\frac{2}{3}$ inches per month in parts of the Amazon Basin, how much rain will fall over $3\frac{1}{2}$ months?