

Table three's chain challenge!

Explanation by Sabina, Madeline, and Verena

To solve the "linked chain challenge" we put our heads together, and we decided to use the numbers we were given to see what different combinations we could make that equaled one whole. Then we looked at our work to see how we could use fractions to represent our work. We started with twentieths because the numbers were literally out of twenty such as $10/20 + 3/20 + 2/20 + 3/20 + 2/20 = 20/20$ then we simplified it as much as we could so, using our example $1/2 + 3/20 + 1/10 + 3/20 + 1/10 = 20/20$ or one whole. Most of our problems use twentieths because we feel they accurately represent our work in the most direct way possible.

1. $\frac{2}{20} + \frac{3}{20} + \frac{4}{20} + \frac{6}{20} + \frac{5}{20} = \frac{20}{20} \rightarrow \frac{1}{10} + \frac{3}{20} + \frac{2}{5} + \frac{3}{10} = \frac{20}{20} \text{ or } 1$
2. $\frac{10}{20} + \frac{6}{20} + \frac{4}{20} = \frac{20}{20} \rightarrow \frac{1}{2} + \frac{3}{10} + \frac{1}{5} = \frac{20}{20} \text{ or } 1$
3. $\frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} = \frac{20}{20} \rightarrow \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} = \frac{20}{20} \text{ or } 1$
4. $\frac{1}{2} + \frac{1}{4} + \frac{1}{4} = \frac{20}{20} \text{ or } 1$
5. $\frac{12}{20} + \frac{8}{20} = \frac{20}{20} \text{ or } \frac{3}{5} + \frac{2}{5} = \frac{20}{20} \text{ or } 1$
6. $\frac{12}{20} + \frac{3}{20} + \frac{5}{20} \text{ or } \frac{3}{5} + \frac{3}{20} + \frac{5}{20} = \frac{20}{20} \neq 1$
7. $\frac{9}{20} + \frac{2}{20} + \frac{9}{20} + \frac{5}{20} = \frac{20}{20} \text{ or } \frac{9}{20} + \frac{1}{10} + \frac{1}{5} + \frac{5}{20} = \frac{20}{20} \neq 1$
8. $\frac{9}{20} + \frac{9}{20} + \frac{2}{20} = \frac{20}{20} \text{ or } \frac{9}{20} + \frac{9}{20} + \frac{1}{10} = \frac{20}{20} \text{ or } 1$
9. $\frac{8}{20} + \frac{2}{20} + \frac{10}{20} = \frac{20}{20} \text{ or } \frac{1}{5} + \frac{1}{10} + \frac{1}{2} = \frac{20}{20} \text{ or } 1$
10. $\frac{5}{20} + \frac{5}{20} + \frac{5}{20} + \frac{5}{20} = \frac{20}{20} \text{ or } \frac{5}{20} + \frac{5}{20} + \frac{5}{20} + \frac{5}{20} = \frac{20}{20} \text{ or } 1$
11. $\frac{6}{20} + \frac{12}{20} + \frac{2}{20} \text{ or } \frac{3}{10} + \frac{3}{5} + \frac{1}{10} = \frac{20}{20} = 1$
12. $\frac{4}{20} + \frac{4}{20} + \frac{4}{20} + \frac{4}{20} + \frac{4}{20} = \frac{20}{20} \text{ or } \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \frac{20}{20} \text{ or } 1$
13. $\frac{3}{20} + \frac{9}{20} + \frac{6}{20} + \frac{2}{20} \text{ or } \frac{3}{20} + \frac{3}{10} + \frac{1}{10} = \frac{20}{20} = 1$
14. $\frac{12}{20} + \frac{3}{20} + \frac{2}{20} + \frac{3}{20} \text{ or } \frac{3}{5} + \frac{3}{20} + \frac{1}{10} + \frac{3}{20} = \frac{20}{20} \text{ or } 1$
15. $\frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} \text{ or } \frac{1}{10} + \frac{2}{5} + \frac{1}{10} + \frac{2}{5} = \frac{20}{20} = 1$
16. $\frac{3}{20} + \frac{3}{20} + \frac{12}{20} \text{ or } \frac{3}{20} + \frac{3}{20} + \frac{2}{10} + \frac{1}{10} = \frac{20}{20} = 1$
17. $\frac{8}{20} + \frac{10}{20} \text{ or } \frac{2}{5} + \frac{1}{2} = \frac{20}{20} \text{ or } 1$
18. $\frac{10}{20} + \frac{5}{20} + \frac{3}{20} \text{ or } \frac{5}{10} + \frac{1}{10} + \frac{5}{20} + \frac{3}{20} = \frac{20}{20} = 1$
19. $\frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{10}{20} \text{ or } \frac{1}{10} + \frac{5}{20} + \frac{1}{10} + \frac{3}{5} = \frac{20}{20} = 1$
20. $\frac{9}{20} + \frac{8}{20} + \frac{3}{20} \text{ or } \frac{9}{20} + \frac{2}{5} + \frac{3}{20} = \frac{20}{20} = 1$
21. $(\frac{3}{20} + \frac{3}{20} + \frac{3}{20}) + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{3}{20} = \frac{20}{20} = 1$
22. $\frac{6}{20} + \frac{8}{20} \text{ or } \frac{3}{10} + \frac{2}{5} = \frac{20}{20} = 1$
23. $\frac{6}{20} + \frac{4}{20} + \frac{4}{20} + \frac{6}{20} \text{ or } \frac{3}{10} + \frac{1}{5} + \frac{1}{5} + \frac{3}{10} = \frac{20}{20} = 1$
24. $\frac{5}{20} + \frac{5}{20} + \frac{8}{20} + \frac{2}{20} \text{ or } \frac{5}{20} + \frac{5}{20} + \frac{2}{5} + \frac{1}{10} = \frac{20}{20} = 1$
25. $\frac{3}{20} + \frac{3}{20} + \frac{3}{20} + \frac{6}{20} + \frac{5}{20} \text{ or } \frac{3}{20} + \frac{3}{20} + \frac{3}{20} + \frac{3}{5} = \frac{20}{20} = 1$
26. $\frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{2}{20} + \frac{8}{20} \text{ or } \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{2}{5} + \frac{2}{5} = \frac{20}{20} = 1$
27. $(\frac{3}{20} + \frac{3}{20} + \frac{3}{20}) + \frac{8}{20} + \frac{3}{20} = \frac{20}{20} \text{ or } \frac{3}{5} + \frac{2}{5} + \frac{2}{5} = \frac{20}{20} = 1$