Practice 11-4

Adding and Subtracting Rational Expressions

Add or subtract.

1. $\dfrac{3x}{4} - \dfrac{x}{4}$

2. $\dfrac{3}{x} + \dfrac{5}{x}$

3. $\dfrac{5x}{6} - \dfrac{2x}{3}$

4. $\dfrac{x}{3} + \dfrac{x}{5}$

5. $\dfrac{3m}{4} + \dfrac{5m}{12}$

6. $\dfrac{4x}{7} - \dfrac{3x}{14}$

7. $\dfrac{6}{7t} - \dfrac{3}{7t}$

8. $\dfrac{d}{3} + \dfrac{4d}{3}$

9. $\dfrac{7}{2d} - \dfrac{3}{2d}$

10. $\dfrac{3}{2d^2} + \dfrac{4}{3d}$

11. $\dfrac{9}{m+1} - \dfrac{6}{m-1}$

12. $\dfrac{3}{x} - \dfrac{7}{x}$

13. $\dfrac{7a}{6} + \dfrac{a}{6}$

14. $\dfrac{4}{k+3} - \dfrac{8}{k+3}$

15. $\dfrac{3}{4z^2} + \dfrac{7}{4z^2}$

16. $\dfrac{6}{x^2-1} + \dfrac{7}{x-1}$

17. $\dfrac{2x}{x^2-1} - \dfrac{3}{x+1}$

18. $\dfrac{3t}{8} + \dfrac{3t}{8}$

19. $\dfrac{4}{3a^2} - \dfrac{1}{2a^3}$

20. $\dfrac{4}{a+4} + \dfrac{6}{a+4}$

21. $\dfrac{4}{x+3} + \dfrac{6}{x-2}$

22. $\dfrac{6}{7t^3} - \dfrac{8}{3t}$

23. $\dfrac{3}{2x+6} + \dfrac{4}{6x+18}$

24. $\dfrac{5}{8a} - \dfrac{3}{8a}$

25. $\dfrac{5}{r^2-4} + \dfrac{7}{r+2}$

26. $\dfrac{6}{a^2-2} + \dfrac{9}{a^2-2}$

27. $\dfrac{5x}{4} - \dfrac{x}{4}$

28. $\dfrac{4}{3x+6} - \dfrac{3}{2x+4}$

29. $\dfrac{4}{c^2+4c+3} + \dfrac{1}{c+3}$

30. $\dfrac{6}{x^2-3x+2} - \dfrac{4}{x-2}$

31. Brian rode his bike 2 mi to his friend's house. Brian's bike had a flat tire, so he had to walk home. His walking rate is 25% of his biking rate.

   a. Write an expression for the amounts of time Brian spent walking and riding his bike.

   b. If Brian's biking rate is 12 mi/h, how much time did he spend walking and riding his bike?

32. Trudi and Sean are on a river canoeing. Because of the current of the river, their downstream rate is 250% of their upstream rate. They canoe 3 mi upstream and then return to their starting point.

   a. Write an expression for the amount of time Trudi and Sean spend canoeing.

   b. If their upstream rate is 2 mi/h, how much time do Trudi and Sean spend canoeing?

   c. If their upstream rate is 3 mi/h, how much time do Trudi and Sean spend canoeing?