1. Resuelve la ecuación: [Comp.det.]

1. $2(x-1)-6 = 3(x-3)$
2. $2x-2(x-3)-2x = 3$
3. $-13(x-2)-x = 4-6x$
4. $9-x-1 = x-3(2x-3)$
5. $x+2+3x-7 = 3(x-1)$
6. $2(3x-2)-x+3 = x-2$
7. $6x-1-3(2x-1)-1 = x$
8. $2(x-1)-1-2 = 7x-2x$
9. $2(x-1)-2(x-3)-x = 8$
10. $6-2-6x = x-3(2x-1)$
11. $x-2(3x-2)-1 = 3x-4$
12. $14-x-3(x+3) = 3-3x$
13. $x-3+12 = 3x-3(x-3)$
14. $2(3x+1)+2-4x-8 = x$
15. $2x-2-3x-3 = 3(x-2)$
16. $3-x-2(2x-2) = 6-6x$
17. $1-3(3x-1)+11x = 3-x$
18. $2(x+2)-5x-2 = 2-2x$
19. $5x-3x+9 = 3(x+1)+3$
20. $6x-1-3x-1 = 2(2x-2)$
21. $1-3x-8 = 2(2x-3)-6x$
22. $x-3(3x+3)+14 = 1-5x$
23. $2x-3-4x = 2-2(3x+1)$
24. $x+2+11x = 3(3x+3)-6$
25. $2x+8x-6 = 3(3x-1)-3$
26. $3(3x+2)-x-10x-5 = 2$
27. $13-3x-3(x+3) = 3-3x$
28. $3(x+3)-3x-10 = 2+2x$
29. $3x-3(3x-3)-6 = 2-7x$
30. $2(2x+3)-4x-1 = 3x+3$
31. $2x-2(2x+3)+6 = 1-3x$
32. $2(2x-3)+2x+4 = 5x-1$
33. $7x-2(3x-2)-3x-3 = 2$
34. $3(x+3)+2x-10 = 3x-2$
35. $2x-1+8x+8 = 2(3x+3)$
36. $4-3x-3(3x+1) = 1-11x$
37. $6x-2(2x+3)+9 = 3x+1$
38. $x-3(3x-3)-1+10x = 11$
39. $2(3x+3)+2x-7x-5 = 2$
40. $1-3x-1 = 2(3x-2)-12x$
41. $3x+1-2 = 10x-3(2x+1)$
42. $3(3x+2)+3x-11x = 8-1$
43. $2(x-1)-2(2x-3) = 2x+1$
44. $11x-3(3x-3)-6 = 3x+2$
45. $3+10x-10 = 3(2x-3)+x$
46. $1-3x+6 = 3(3x+3)-13x$
47. $7x-2-3(2x+3) = 2x-13$
48. $3(3x+2)+3x-5 = 10x-2$
49. $2(x+2)+2(2x+2)-4 = 5x$
50. $3(x+1)-6 = 12x-2(3x+1)$
51. $5x-3(2x-3) = 2(x-1)+15$
52. $3(x+1)+3(2x-2) = 10x-3$
53. $2x-2(3x-2) = 14-3(x+3)$
54. $3(2x+2)-3(3x+2) = 1-2x$
55. $6x-3(x+1)-2(2x+3)+8 = 0$
56. $2(3x+1)+8 = 15x-2(3x-3)$
57. $3(2x+3)-14x = 4-2(2x-2)$
58. $3(3x+2)-2(3x-3)-4x = 10$
59. $2(2x+2)+3(2x+1)-4 = 12x$
60. $14x-3(3x+2) = 3(2x+3)-14$

2. Resuelve la ecuación: [Comp.ind.]

1. $1-2x = 3-2(x+1)$
2. $2-x+1 = 3(x+1)-4x$
3. $3(x-1)+1+2 = 2x+x$
4. $3(3x+1)-3 = 10x-x$
5. $3(x+3)-2x-7 = 2+x$
6. $2(2x-1)-x+1 = 3x-1$
7. $2(3x-1)+3-5x-1 = x$
8. $2(3x-3)-1+7 = 7x-x$
9. $2x-3-4x = 1-2(x+2)$
10. $2(3x-1)-x+5 = 3+5x$
11. $5x-2(x-3)-3x-3 = 3$
12. $x+5x+5 = 2(3x+1)+3$
13. $3(x+2)+2x-3 = 3+5x$
14. $1-2x+11x-4 = 3(3x-1)$
15. $2(2x-3)+3x-2+8 = 7x$
16. $5x-2(x-3)-3(x-2) = 12$
17. $2-2(3x-1) = 2(x+2)-8x$
18. $3(2x-2)-3(x-3) = 3x+3$
19. $2(3x+2)+5 = 3(x+3)+3x$
20. $2(3x+3)-2(x-2)-10 = 4x$

3. Resuelve la ecuación: [Incomp.]

1. $2(x-1)-2x = 1$
2. $2(x+3)+2-4 = 2x$
3. $3(x+1)-2-4x = 7-x$
4. $2-3(x+2)+9 = x-4x$
5. $2(3x-3)+1 = 9x-3x$
6. $4x-2(x-1)-2x-7 = 2$
7. $3(x+1)+2+1 = 5x-2x$
8. $4-2(x+1)-3x = 3-5x$
9. $2(3x+3)-7x-5 = 3-x$
10. $2(3x-1)+2x+3 = 8x-1$
11. $1-3(3x-2)+6x = 6-3x$
12. $3(3x+3)-3(3x-1) = 18$
13. $2(3x+1)-3x-3 = 3x+2$
14. $3(2x-1)+3x+5 = 9x-3$
15. $9x-3x-2 = 2(3x-3)+2$
16. $3(2x+3)-2x-11 = 3+4x$
17. $2(3x-3)-3(x-3) = 3x+8$
18. $10x-2(3x+2) = 2(2x+1)$
19. $3(2x+3)-4x = 2(x+3)+8$
20. $3(x-1)-3(2x-3) = 12-3x$

4. Resuelve la ecuación: [Comp.det.]

1. $\frac{25}{27} - \frac{x-1}{9} = 1$
2. $\frac{5}{12} - \frac{x-3}{6} = 1$
3. $\frac{x}{2} + \frac{3x-1}{5} = x$
4. $\frac{17x}{18} + \frac{x+1}{6} = x$
5. $\frac{3x}{10} + \frac{3x+1}{5} = x$
6. $\frac{x+6}{8} + 1 = \frac{2x+1}{4}$
7. $\frac{6x+7}{16} - \frac{x-3}{8} = 1$
8. $\frac{9x+7}{16} + \frac{x-1}{2} = x$
9. $\frac{x+2}{9} - \frac{3x-13}{18} = 1$
10. $\frac{21x-2}{24} + \frac{x+1}{12} = x$
11. $\frac{17x-6}{24} + \frac{x+1}{3} = x$
12. $\frac{2x+3}{6} + \frac{2x-1}{4} = x$
13. $\frac{5x+13}{12} + \frac{x-2}{2} = x$
14. $-\frac{2x-25}{30} - \frac{x-3}{15} = 1$
15. $x - \frac{x-1}{3} = \frac{17x+10}{27}$
16. $\frac{x+2}{6} + \frac{2x+1}{2} - x = 1$
17. $\frac{2x+3}{12} - \frac{x-6}{8} - 1 = 0$
18. $\frac{14x-13}{30} + \frac{x+1}{2} = x$
19. $\frac{3x+2}{10} - \frac{2x-17}{20} = 1$
20. $2 - \frac{2x+3}{2} = \frac{x+6}{8} - x$
21. $\frac{3(x+2)}{16} + \frac{2x-1}{2} = x$
22. $\frac{4x+3}{5} + \frac{x+2}{2} - x = 2$
23. $x - \frac{2x-1}{3} - \frac{3x-5}{6} = 1$
24. $x - \frac{2x-1}{2} - \frac{2x-17}{16} = 1$
25. $\frac{3x+13}{18} - \frac{2(x-1)}{9} = 1$
26. $x - \frac{x+10}{27} - \frac{3x-1}{10} = 0$
27. $\frac{11x+14}{16}\,1\,1 = x - \frac{x-1}{8}$
28. $\frac{5x+7}{9} + \frac{3x+1}{6} - x = 1$
29. $\frac{3(x+1)}{2} - 2 = \frac{21x-4}{16}$
30. $x - \frac{x+2}{4} + 1 = \frac{13x+9}{20}$
31. $\frac{3(3x-1)}{16} + \frac{3x+1}{8} = 1$
32. $x - \frac{x-1}{3} - 1 = \frac{21x-22}{27}$

33. $x - \frac{3x-5}{12} - \frac{2(x-1)}{3} = 1$

34. $x - \frac{3x-5}{6} - \frac{2(x-1)}{3} = 1$

35. $x - \frac{x-2}{3} = \frac{19x-10}{30} + 1$

36. $x - \frac{2x-1}{4} - \frac{5(x-2)}{12} = 1$

37. $\frac{9x-16}{15} + \frac{3x+2}{2} = 2x$

38. $\frac{13x+12}{16} + \frac{x+2}{8} - x = 1$

39. $\frac{14x+9}{16} + \frac{3x+2}{8} - x = 1$

40. $x - \frac{8x-25}{27} - 2 = \frac{2x-3}{3}$

41. $x - \frac{2x-1}{6} - \frac{13x-14}{18} = 1$

42. $x - \frac{3x-1}{8} - \frac{12x-13}{16} = 1$

43. $\frac{2x-1}{4} + 1 = x - \frac{3(2x-3)}{10}$

44. $\frac{4x+3}{6} + \frac{3(x+1)}{2} - 2x = 2$

45. $\frac{2(7x+4)}{15} - 2x = 1 - \frac{2x+1}{2}$

46. $\frac{1}{10} + \frac{3}{5}(x+1) - \frac{x-1}{2} = 1$

47. $\frac{3x+1}{3} - \frac{11}{12}x + \frac{x+3}{4} = 1$

48. $\frac{4x+1}{6} - \frac{3x-2}{2} + \frac{x+3}{3} = 2$

49. $\frac{x+1}{2} - \frac{2x-13}{16} - \frac{2x+1}{4} = 1$

50. $\frac{2x+3}{2} - \frac{3x-4}{8} = \frac{x-2}{4} + 2$

51. $\frac{5x+6}{18} - \frac{x-3}{6} - \frac{2}{9}(x-1) = 1$

52. $1 - \frac{2x+3}{3} - \frac{1}{6} = \frac{3x-1}{2} - 2x$

53. $\frac{x-1}{2} - \frac{14x+3}{18} + x = \frac{2}{3}(x-1)$

54. $\frac{2x+3}{3} + \frac{x-1}{9} - x = 1 + \frac{5x+3}{27}$

55. $\frac{11x-1}{16} - \frac{x+3}{4} + \frac{3x+2}{2} = 2x$

56. $x - \frac{x+1}{2} - \frac{3}{8}(x-1) = \frac{x-15}{16} + 1$

57. $\frac{2x+3}{2} - \frac{23x-6}{16} + \frac{3x+1}{8} = 2$

58. $x - \frac{x+1}{3} = \frac{2}{27}(10x-3) - \frac{x+1}{9}$

59. $\frac{15x+19}{24} - \frac{x-3}{12} + \frac{x+2}{2} - x = 2$

60. $\frac{x+6}{20} + \frac{3x+1}{2} + \frac{3x+1}{10} - 2x = 1$

5. Resuelve la ecuación: [Comp.ind.]

1. $\frac{1}{3} - 1 = x - \frac{3x+2}{3}$

2. $\frac{x+1}{2} - x = 1 - \frac{x+1}{2}$

3. $\frac{2x+1}{8} - 1 = x - \frac{6x+7}{8}$

4. $\frac{1}{4} + \frac{2x-3}{4} = x - \frac{x+1}{2}$

5. $\frac{5x}{6} - \frac{x-3}{3} + \frac{x-2}{2} = x$

6. $\frac{5x-3}{8} + \frac{x+1}{2} - \frac{x+1}{8} = x$

7. $\frac{x+2}{6} - \frac{x-2}{6} = x - \frac{3x-2}{3}$

8. $2x - \frac{2x-1}{2} - \frac{x}{4} = \frac{3x+2}{4}$

9. $\frac{5x+1}{9} - \frac{2x-3}{3} + \frac{x+1}{9} = 1$

10. $\frac{x-2}{3} - \frac{2x-1}{6} = x - \frac{2x+1}{2}$

11. $x - \frac{x-3}{2} - 1 = \frac{5x-1}{6} - \frac{x-2}{3}$

12. $\frac{10x+7}{9} - \frac{3x-1}{3} - \frac{x+1}{9} = 1$

6. Resuelve la ecuación: [Incomp.]

1. $\frac{x+2}{2} = x - \frac{3x-8}{6}$

2. $\frac{7}{18} + \frac{3x+1}{3} - x = 1$

3. $\frac{x-1}{6} = x - \frac{20x-1}{24}$

4. $\frac{25x-2}{30} + \frac{x-1}{6} = x$

5. $\frac{9x+14}{18} - x = 1 - \frac{x+1}{2}$

6. $x - \frac{x-1}{2} - \frac{4x-7}{8} - 1 = 0$

7. $x - \frac{3(x+1)}{5} 1 = \frac{4x-9}{10}$

8. $\frac{18x-25}{27} + 1 = x - \frac{3x-1}{9}$

9. $\frac{20x+11}{24} + \frac{2x+3}{12} - x = 1$

10. $\frac{2x-1}{2} - \frac{x-1}{5} = x - \frac{2x-3}{10}$

11. $\frac{3x-8}{6} + \frac{3x+1}{3} - \frac{x-3}{2} = x$

12. $x - \frac{10x+13}{24} - \frac{x-2}{2} = \frac{x+3}{12}$

7. Resuelve la ecuación: [Comp.det.]

1. $\frac{9}{4} - \frac{x+1}{4x} - \frac{4x+3}{4x-4} = \frac{x-1}{x}$

2. $\frac{7}{3x} - \frac{1}{x} - \frac{3x+2}{3x^2} - \frac{1}{6x} = 0$

3. $\frac{x-2}{x-1} - \frac{x^2+x+1}{x^2-1} + \frac{x-1}{x+1} = 1$

4. $\frac{x-1}{x} + \frac{x+3}{6x-3} + \frac{x+1}{2x-1} = \frac{5}{3}$

5. $\frac{7}{3} - \frac{2x-3}{2x-4} - \frac{x+1}{x} = \frac{2x-5}{6x}$

6. $\frac{x+1}{x} + \frac{x^2+x-1}{2x^2-x} + \frac{x-1}{2x-1} = 2$

7. $\frac{x-1}{x} + \frac{x+7}{x+2} + \frac{x^2+x+1}{x^2+2x} = 3$

8. $\frac{x+1}{2x} - \frac{x^2+x+3}{2x^2+2x} + \frac{x-1}{x+1} = 1$

9. $3 - \frac{x-4}{x-3} - \frac{x^2+x+1}{x^2-9} = \frac{x+5}{x+3}$

10. $3 - \frac{x^2+x-9}{x^2-4} - \frac{x}{x-2} = \frac{x+1}{x+2}$

11. $\frac{x-1}{x+1} + \frac{x+5}{x-1} - \frac{x^2+x+11}{x^2-1} = 1$

12. $\frac{x-1}{x} + \frac{x^2+x-3}{2x^2+x} + \frac{x+1}{2x+1} = 2$

13. $\frac{x-2}{2x} + \frac{x^2+x+3}{4x^2} + \frac{x+1}{x} = \frac{7}{4}$

14. $\frac{3}{2} - \frac{x-2}{2x-1} - \frac{x+1}{2x} = \frac{x^2+x-1}{2x^2-x}$

15. $\frac{x+1}{x-2} + \frac{x-1}{x+2} + \frac{x^2+x-16}{x^2-4} = 3$

16. $\frac{3}{2} - \frac{x-9}{4x-4} - \frac{x+1}{x-1} = \frac{x^2+x-4}{4x^2-4}$

17. $\frac{x+1}{x+3} + \frac{x^2+x-19}{x^2+3x} + \frac{x+6}{x} = 3$

18. $\frac{x^2+x-32}{x^2-9} + \frac{x-1}{x+3} + \frac{x+1}{x-3} = 3$

19. $\frac{x+1}{2x-3} + \frac{x-2}{x} + \frac{x^2+x-3}{2x^2-3x} = 2$

20. $\frac{x-5}{2x^2+2x} + \frac{1}{x} = \frac{1}{2x+2} - \frac{1}{2x}$

21. $\frac{5}{3} - \frac{3x+7}{9x+6} - \frac{x-1}{x} = \frac{x^2+x+1}{3x^2+2x}$

22. $\frac{x+1}{3x} + \frac{x-1}{x} = \frac{7}{3} - \frac{3x^2+3x-1}{3x^2}$

23. $\frac{2x-1}{2x-4} + \frac{2x-3}{2x} + \frac{x^2+x+1}{x^2-2x} = 3$

24. $\frac{5}{3} - \frac{x+1}{x} - \frac{x^2+x+3}{3x^2-2x} = \frac{3x-13}{9x-6}$

25. $\frac{x+5}{4x+4} + \frac{x-6}{4x-4} = \frac{3}{2} - \frac{x^2+x+1}{x^2-1}$

26. $\frac{x+1}{3x} + \frac{3x^2+3x+2}{9x^2-3x} = 1 - \frac{3x-7}{9x-3}$

27. $\frac{2}{3x+1} - \frac{x+1}{9x^2+3x} + \frac{1}{9x+3} = \frac{1}{x}$

28. $\frac{5}{4} - \frac{12x+31}{24x+36} - \frac{x+1}{4x+6} = \frac{3x+1}{6x}$

8. Resuelve la ecuación: [Sol. falsa]

1. $\frac{1}{3x}-\frac{x-6}{6x^2}=\frac{1}{x}-\frac{x-1}{x^2}$ **2.** $\frac{x+1}{x+2}+\frac{x+1}{2x}+\frac{x+4}{2x+4}=2$ **3.** $\frac{x-1}{2x-1}+\frac{x+1}{3x}+\frac{x+1}{6x-3}=1$ **4.** $\frac{x-3}{6x^2}+\frac{x+1}{2x^2}=\frac{5}{6x}-\frac{1}{3x}$

5. $1-\frac{x+1}{x-1}=\frac{x-1}{x+1}-\frac{x^2+x+4}{x^2-1}$ **6.** $\frac{x^2-x-6}{x^2-4}-\frac{x-1}{x+2}=1-\frac{x-3}{x-2}$ **7.** $\frac{x-4}{x-1}+\frac{x+2}{x}+\frac{x^2+x+1}{x^2-x}=3$ **8.** $\frac{x+1}{x-3}+\frac{x^2+x-21}{x^2-3x}+\frac{x-7}{x}=3$

9. $\frac{x+4}{2x+2}-\frac{x^2+x+1}{2x^2+2x}+\frac{x-1}{x+1}=1$ **10.** $3-\frac{2x-5}{2x-2}-\frac{x^2+x+1}{x^2-1}=\frac{2x+5}{2x+2}$ **11.** $3-\frac{3x-19}{3x-9}-\frac{x^2+x+1}{x^2-3x}=\frac{3x+1}{3x}$ **12.** $3-\frac{4x-11}{4x-8}-\frac{x^2+x+1}{x^2-4}=\frac{4x+11}{4x+8}$

9. Resuelve la ecuación: [Comp.ind.]

1. $\frac{7}{4}-\frac{x+1}{2x}-\frac{x-6}{4x}=\frac{x+1}{x}$ **2.** $\frac{x-1}{x+1}-\frac{x^2+x+2}{x^2+x}+\frac{x+2}{x}=1$ **3.** $\frac{x-4}{x}+\frac{x^2+x-4}{x^2-x}+\frac{x+1}{x-1}=3$ **4.** $\frac{13}{9}-\frac{x-12}{9x}-\frac{x+1}{x}-\frac{x+1}{3x}=0$

5. $\frac{x-2}{2x^2-3x}+\frac{1}{6x-9}=\frac{1}{x}-\frac{1}{3x}$ **6.** $\frac{x+4}{3x+3}+\frac{x^2+x+1}{x^2+x}=\frac{5}{3}-\frac{x-3}{3x}$ **7.** $2-\frac{x+2}{2x+1}-\frac{x-1}{x}-\frac{x^2+x+1}{2x^2+x}=0$ **8.** $\frac{x+2}{x-1}-\frac{x^2+x+4}{x^2-1}+\frac{x-1}{x+1}=1$

9. $\frac{x^2+x-36}{x^2-9}+\frac{x-2}{x+3}+\frac{x+1}{x-3}=3$ **10.** $\frac{x^2+x+6}{6x^2+6x}+\frac{x+1}{x}=\frac{4}{3}-\frac{x-9}{6x-6}$ **11.** $\frac{5}{3}-\frac{x^2+x+1}{3x^2-x}-\frac{3x-14}{9x-3}=\frac{x+1}{x}$ **12.** $\frac{5}{6}-\frac{x^2+x-3}{6x^2}-\frac{x-4}{6x}=\frac{x^2+x+1}{2x^2}$

10. Resuelve la ecuación: [Incomp.]

1. $\frac{x^2-x+6}{x^2-1}-1=\frac{x-1}{x+1}-\frac{x-2}{x-1}$ **2.** $3-\frac{x+4}{x}-\frac{x-3}{x+1}=\frac{x^2+x+1}{x^2+x}$ **3.** $\frac{x-1}{5x^2}+\frac{x+1}{3x^2}=\frac{3}{5x}-\frac{x+1}{15x^2}$ **4.** $\frac{x^2+x+4}{3x^2+3x}+\frac{x-3}{3x}=\frac{5}{3}-\frac{x+1}{x}$

5. $\frac{x^2+x-17}{x^2-9}+\frac{x-2}{x-3}+\frac{x+1}{x+3}=3$ **6.** $\frac{x+1}{3x^2-2x}+\frac{1}{3x-2}=\frac{5}{3x}-\frac{1}{x}$ **7.** $\frac{1}{x}+\frac{x-1}{6x^2+3x}+\frac{1}{3x}=\frac{3}{2x+1}$ **8.** $\frac{7}{6}-\frac{x+1}{3x+2}-\frac{x+1}{2x}=\frac{6x-7}{18x+12}$

9. $\frac{x+1}{2x^2-2x}+\frac{1}{x-1}+\frac{1}{2x}-\frac{2}{x}=0$ **10.** $2-\frac{x^2+x-1}{2x^2}-\frac{x-3}{2x}=\frac{x^2+x+1}{x^2}$ **11.** $\frac{x-2}{x+2}+\frac{(x+4)(x-3)}{x^2-4}+\frac{x+1}{x-2}=3$ **12.** $\frac{x-2}{x+1}-3+\frac{x^2+x-10}{x^2-1}+\frac{x+1}{x-1}=0$

Soluciones

1.1. 1 **1.2.** $\frac{3}{2}$ **1.3.** $\frac{-3}{2}$ **1.4.** $\frac{1}{4}$ **1.5.** 2 **1.6.** $\frac{-1}{4}$ **1.7.** 1 **1.8.** $\frac{-1}{3}$ **1.9.** -4 **1.10.** 1 **1.11.** 0 **1.12.** 2 **1.13.** 0 **1.14.** 4 **1.15.** $\frac{1}{4}$ **1.16.** -1 **1.17.** $\frac{-1}{3}$ **1.18.** 0 **1.19.** 3 **1.20.** 2 **1.21.** -1 **1.22.** $\frac{4}{3}$ **1.23.** $\frac{3}{4}$ **1.24.** $\frac{1}{3}$ **1.25.** 0 **1.26.** $\frac{-1}{2}$ **1.27.** $\frac{1}{3}$ **1.28.** $\frac{-3}{2}$ **1.29.** -1 **1.30.** $\frac{2}{3}$ **1.31.** 1 **1.32.** 1 **1.33.** $\frac{-1}{2}$ **1.34.** $\frac{-1}{2}$ **1.35.** $\frac{-1}{4}$ **1.36.** 0 **1.37.** 2 **1.38.** $\frac{3}{2}$ **1.39.** 1 **1.40.** $\frac{-4}{3}$ **1.41.** 2 **1.42.** 1 **1.43.** $\frac{3}{4}$ **1.44.** 1 **1.45.** $\frac{-2}{3}$ **1.46.** 2 **1.47.** 2 **1.48.** $\frac{-3}{2}$ **1.49.** -4 **1.50.** $\frac{-1}{3}$ **1.51.** $\frac{-4}{3}$ **1.52.** 0 **1.53.** -1 **1.54.** -1 **1.55.** -1 **1.56.** $\frac{4}{3}$ **1.57.** $\frac{1}{4}$ **1.58.** 2 **1.59.** $\frac{3}{2}$ **1.60.** -1 **2.1.** comp.ind. **2.2.** comp.ind. **2.3.** comp.ind. **2.4.** comp.ind. **2.5.** comp.ind. **2.6.** comp.ind. **2.7.** comp.ind. **2.8.** comp.ind. **2.9.** comp.ind. **2.10.** comp.ind. **2.11.** comp.ind. **2.12.** comp.ind. **2.13.** comp.ind. **2.14.** comp.ind. **2.15.** comp.ind. **2.16.** comp.ind. **2.17.** comp.ind. **2.18.** comp.ind. **2.19.** comp.ind. **2.20.** comp.ind. **3.1.** inc. **3.2.** inc. **3.3.** inc. **3.4.** inc. **3.5.** inc. **3.6.** inc. **3.7.** inc. **3.8.** inc. **3.9.** inc. **3.10.** inc. **3.11.** inc. **3.12.** inc. **3.13.** inc. **3.14.** inc. **3.15.** inc. **3.16.** inc. **3.17.** inc. **3.18.** inc. **3.19.** inc. **3.20.** inc. **4.1.** $\frac{1}{3}$ **4.2.** $\frac{-1}{2}$ **4.3.** 2 **4.4.** $\frac{-3}{2}$ **4.5.** 2 **4.6.** $\frac{-4}{3}$ **4.7.** $\frac{3}{4}$ **4.8.** 1 **4.9.** -1 **4.10.** 0 **4.11.** -2 **4.12.** $\frac{3}{2}$ **4.13.** 1 **4.14.** $\frac{1}{4}$ **4.15.** 1 **4.16.** 1 **4.17.** 0 **4.18.** 2 **4.19.** -1 **4.20.** -2 **4.21.** $\frac{2}{3}$ **4.22.** $\frac{4}{3}$ **4.23.** 1 **4.24.** $\frac{-1}{2}$ **4.25.** -1 **4.26.** -1 **4.27.** $\frac{-4}{3}$ **4.28.** 1 **4.29.** $\frac{4}{3}$ **4.30.** $\frac{-1}{2}$ **4.31.** -1 **4.32.** $\frac{4}{3}$ **4.33.** -1 **4.34.** 3 **4.35.** 0 **4.36.** -1 **4.37.** $\frac{2}{3}$ **4.38.** 0 **4.39.** $\frac{3}{4}$ **4.40.** 2 **4.41.** -1 **4.42.** $\frac{-1}{2}$ **4.43.** $\frac{3}{2}$ **4.44.** 0 **4.45.** $\frac{1}{2}$ **4.46.** -2 **4.47.** $\frac{-1}{4}$ **4.48.** $\frac{1}{3}$ **4.49.** $\frac{1}{2}$ **4.50.** $\frac{-4}{3}$ **4.51.** $\frac{1}{2}$ **4.52.** 2 **4.53.** 0 **4.54.** 0 **4.55.** 3 **4.56.** 3 **4.57.** 0 **4.58.** 0 **4.59.** -1 **4.60.** $\frac{-2}{3}$ **5.1.** comp.ind. **5.2.** comp.ind. **5.3.** comp.ind. **5.4.** comp.ind. **5.5.** comp.ind. **5.6.** comp.ind. **5.7.** comp.ind. **5.8.** comp.ind. **5.9.** comp.ind. **5.10.** comp.ind. **5.11.** comp.ind. **5.12.** comp.ind. **6.1.** inc. **6.2.** inc. **6.3.** inc. **6.4.** inc. **6.5.** inc. **6.6.** inc. **6.7.** inc. **6.8.** inc. **6.9.** inc. **6.10.** inc. **6.11.** inc. **6.12.** inc. **7.1.** $\frac{-3}{4}$ **7.2.** 4 **7.3.** $\frac{-1}{4}$ **7.4.** $\frac{-3}{2}$ **7.5.** $\frac{1}{2}$ **7.6.** $\frac{2}{3}$ **7.7.** $\frac{1}{3}$ **7.8.** $\frac{-2}{3}$ **7.9.** $\frac{-1}{2}$ **7.10.** $\frac{-1}{2}$ **7.11.** $\frac{4}{3}$ **7.12.** -4 **7.13.** -3 **7.14.** $\frac{3}{2}$ **7.15.** 0 **7.16.** 3 **7.17.** $\frac{1}{2}$ **7.18.** -1 **7.19.** -3 **7.20.** $\frac{2}{3}$ **7.21.** -1 **7.22.** 1 **7.23.** $\frac{-4}{3}$ **7.24.** -1 **7.25.** $\frac{1}{3}$ **7.26.** -1 **7.27.** $\frac{-4}{3}$ **7.28.** 1 **8.1.** inc. **8.2.** inc. **8.3.** inc. **8.4.** inc. **8.5.** inc. **8.6.** inc. **8.7.** inc. **8.8.** inc. **8.9.** inc. **8.10.** inc. **8.11.** inc. **8.12.** inc. **9.1.** comp.ind. $x\neq 0$ **9.2.** comp.ind. $x\notin\{-1,0\}$ **9.3.** comp.ind. $x\notin\{0,1\}$ **9.4.** comp.ind. $x\neq 0$ **9.5.** comp.ind. $x\notin\left\{0,\frac{3}{2}\right\}$ **9.6.** comp.ind. $x\notin\{-1,0\}$ **9.7.** comp.ind. $x\notin\left\{\frac{-1}{2},0\right\}$ **9.8.** comp.ind. $x\notin\{-1,1\}$ **9.9.** comp.ind. $x\notin\{-3,3\}$ **9.10.** comp.ind. $x\notin\{0,1\}$ **9.11.** comp.ind. $x\notin\left\{0,\frac{1}{3}\right\}$ **9.12.** comp.ind. $x\neq 0$ **10.1.** inc. **10.2.** inc. **10.3.** inc. **10.4.** inc. **10.5.** inc. **10.6.** inc. **10.7.** inc. **10.8.** inc. **10.9.** inc. **10.10.** inc. **10.11.** inc. **10.12.** inc.