DIVIDING POLYNOMIALS Divide.

27. Divide $a^2 - 3a + 2$ by $a - 1$.

28. Divide $y^2 + 5y + 7$ by $y + 2$.

29. Divide $2b^2 - 3b - 4$ by $b - 2$.

30. Divide $3p^2 + 10p + 3$ by $p + 3$.

31. Divide $5g^2 + 14g - 2$ by $g + 3$.

32. Divide $c^2 - 25$ by $c - 5$.

33. Divide $x^2 - 3x - 59$ by $x - 9$.

34. Divide $d^2 + 15d + 45$ by $d + 5$.

35. Divide $-x^2 - 6x - 16$ by $x + 2$.

36. Divide $-x^2 + 9x - 12$ by $-x - 2$.

37. Divide $b^2 - 7b + 4$ by $b + 3$.

38. Divide $5 - 7m + 3m^2$ by $m - 3$.

Solve the equation.

26. $\dfrac{1}{4} + \dfrac{4}{x} = \dfrac{1}{x}$

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

28. $\dfrac{1}{5} - \dfrac{2}{5x} = \dfrac{1}{x}$

29. $\dfrac{x}{9} - \dfrac{8}{x} = \dfrac{1}{9}$

30. $\dfrac{x+42}{x} = x$

31. $\dfrac{2}{x} - \dfrac{x}{8} = \dfrac{3}{4}$

32. $\dfrac{-3}{x+7} = \dfrac{2}{x+2}$

33. $\dfrac{2}{x+3} + \dfrac{1}{x} = \dfrac{4}{3x}$

34. $\dfrac{10}{x+3} - \dfrac{3}{5} = \dfrac{10x+1}{3x+9}$

35. $\dfrac{x+3}{x-5} = \dfrac{56-3x}{x^2-13x+40}$

36. $\dfrac{8}{x+4} + 1 = \dfrac{5x}{x^2-2x-24}$

37. $\dfrac{x}{x-11} - 1 = \dfrac{22}{x^2-5x-66}$

38. $\dfrac{2x}{x+3} - \dfrac{x}{x+7} = \dfrac{x^2-1}{x^2+10x+21}$

Solve the equation by completing the square.

32. $x^2 + 10x = 39$

33. $x^2 + 16x = 17$

34. $x^2 - 24x = -44$

35. $x^2 - 8x + 12 = 0$

36. $x^2 + 5x - \dfrac{11}{4} = 0$

37. $x^2 + 11x + \dfrac{21}{4} = 0$

38. $x^2 - \dfrac{2}{3}x - 3 = 0$

39. $x^2 + \dfrac{3}{5}x - 1 = 0$

40. $x^2 + x - 1 = 0$

41. $4x^2 + 4x - 11 = 0$

42. $3x^2 - 24x - 1 = 0$

43. $4x^2 - 40x - 7 = 0$

44. $2x^2 - 8x - 13 = 7$

45. $5x^2 - 20x - 20 = 5$

46. $3x^2 + 4x + 4 = 3$

47. $4x^2 + 6x - 6 = 2$

48. $6x^2 + 24x - 41 = 0$

49. $20x^2 - 120x - 109 = 0$