

pg 694 11-27 odd

$$11. \frac{4}{a} = \frac{3}{a-2}$$

$$4(a-2) = 3a$$

$$4a - 8 = 3a$$

$$-8 = -a$$

$$\boxed{8 = a}$$

$$13. \frac{x-3}{x} = \frac{x-3}{x-6}$$

$$(x-3)(x-6) = x(x-3)$$

$$\cancel{x^2} - 9x + 18 = \cancel{x^2} - 3x$$

$$18 = 6x$$

$$\boxed{3 = x}$$

$$15. \left(\frac{2n}{3} + \frac{1}{2} = \frac{2n-3}{6} \right) 6$$

$$4n + 3 = 2n - 3$$

$$2n = -6$$

$$\boxed{n = -3}$$

$$17. \left(\frac{a-1}{a+1} - \frac{2a}{a-1} = -1 \right)$$

$$(a+1)(a-1)$$

$$(a-1)^2 - 2a(a+1) = -1(a+1)(a-1)$$

$$a^2 - 2a + 1 - 2a^2 - 2a = -a^2 + 1$$

$$-a^2 - 4a + 1 = -a^2 + 1$$

$$-4a = 0$$

$$\boxed{a = 0}$$

$$19. \left(\frac{4x}{2x+3} - \frac{2x}{2x-3} = 1 \right) (2x+3)(2x-3)$$

$$4x(2x-3) - 2x(2x+3) = (2x+3)(2x-3)$$

$$8x^2 - 12x - 4x^2 - 6x = 4x^2 - 9$$

$$-18x = -9$$

$$\boxed{x = \frac{1}{2}}$$

$$21. \left(\frac{a}{3a+b} - \frac{a}{5a+b} = \frac{2}{5} \right) 15(a+2)$$

$$5a - 3a = 6(a+2)$$

$$2a = 6a + 12$$

$$-4a = 12$$

$$\boxed{a = -3}$$

$$23. \left(\frac{2b-5}{b-2} - 2 = \frac{3}{b+2} \right) (b-2)(b+2)$$

$$(2b-5)(b+2) - 2(b-2)(b+2) = 3(b-2)$$

$$\cancel{2b^2} - b - 10 - \cancel{2b^2} + 8 = 3b - 6$$

$$-b - 2 = 3b - 6$$

$$-2 = 4b - 6$$

$$4 = 4b$$

$$\boxed{1 = b}$$

$$(x+2)(x-2)$$

$$25. \left(\frac{x^2-4}{x-2} + x^2 = 4 \right)$$

$$x+2 + x^2 = 4$$

$$x^2 + x - 2 = 0$$

$$(x+2)(x-1) = 0$$

$$\boxed{x = -2} \quad \boxed{x = 1}$$

$$27. \left(\frac{3z}{z^2-5z+4} = \frac{2}{z-4} + \frac{3}{z-1} \right) (z-4)(z-1)$$

$$3z = 2(z-1) + 3(z-4)$$

$$3z = 2z - 2 + 3z - 12$$

$$3z = 5z - 14$$

$$-2z = -14$$

$$\boxed{z = 7}$$