$$2(3x+4) - 4x = 100$$

$$6x + 8 - 4x = 100$$

$$6x - 4x + 8 = 100$$

$$2x + 8 = 100$$

$$-8 \quad -8$$

$$2x = 92$$

$$\frac{2x}{2} = \frac{92}{2}$$

$$x = 46$$

$$2(3x+4) - 4x = 100$$

$$2(3(46)+4) - 4(46) = 100$$

$$2(138+4) - 184 = 100$$

$$2(142) - 184 = 100$$

$$284 - 184 = 100$$

$$100 = 100 \checkmark$$

$$-3x + 2(x-3) - x = -20$$

$$-3x + 2x - 6 - x = -20$$

$$-3x + 2x - 1x - 6 = -20$$

$$-2x - 6 = -20$$

$$-6 \quad +6$$

$$-2x = -14$$

$$\frac{-2x}{-2} = \frac{-14}{-2}$$

$$x = 7$$

$$-3x+2(x-3)-x=-20$$

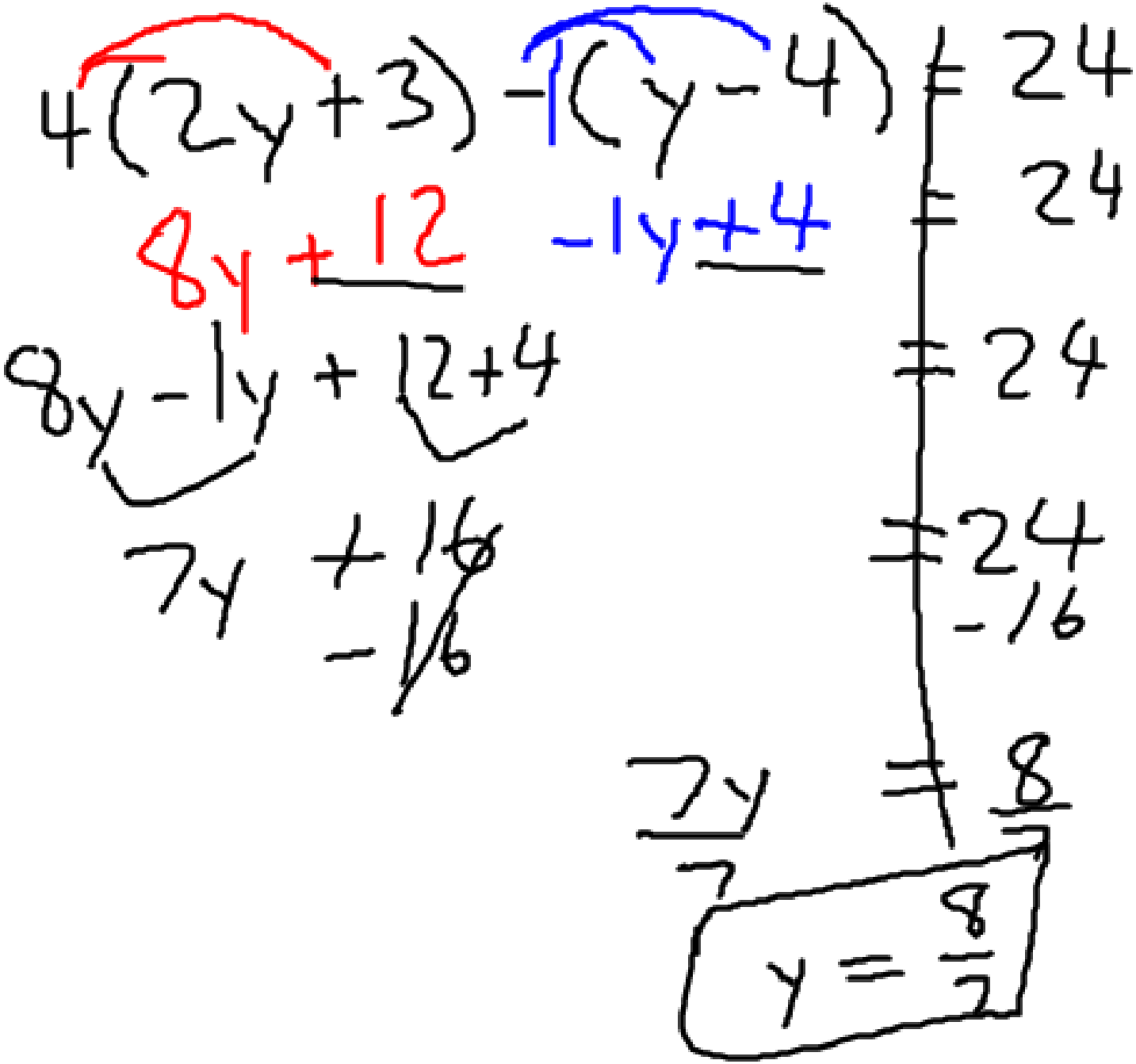
$$-3(7)+2((7)-3)-(7)=-20$$

$$-21+2(4)-7 \quad =-20$$

$$-21+8-7 \quad =-20$$

$$-13-7 \quad =-20$$

$$-20 \quad =-20 \checkmark$$


4(2y+3) -1(y-4) = 24
8y + 12 -1y + 4
8y - 1y + 12 + 4
7y + 16
- 16
= 24
= 24
= 24
= 24
- 16
7y = 8
7
y = 8/7

$$4(2y+3)-(y-4)=24$$

$$4\left(2\left(\tfrac{8}{7}\right)+3\right)-\left(\left(\tfrac{8}{7}\right)-4\right)=24$$

$$4\left(\tfrac{16}{7}+3\right)-\left(-\tfrac{20}{7}\right)=24$$

$$4\left(\tfrac{37}{7}\right)+\tfrac{20}{7}=24$$

$$\tfrac{148}{7}+\tfrac{20}{7}=24$$

$$\tfrac{168}{7}=24$$

$$24=24\ \checkmark$$