Name: _____

Algebra 1 H — Period: _____ (1st qrtr)

HW: Solving Equations

Green book page 132 #s 4-35 (2nd column)

(4) Find Emma's share: $x + 500 = 2250 + 500 = \$2{,}750$.

Check \$2,750 is \$500 more than \$2,250, and \$2,750 + \$2,250 = \$5,000.

Answer Clara's share is \$2,250, and Emma's share is \$2,750.

EXERCISES

Writing About Mathematics

1. Milus said that he finds it easier to work with integers than with fractions. Therefore, in order to solve the equation $\frac{3}{4}a - 7 = \frac{1}{2}a + 3$, he began by multiplying both sides of the equation by 4.

$$4\left(\tfrac{3}{4}a - 7\right) = 4\left(\tfrac{1}{2}a + 3\right)$$
$$3a - 28 = 2a + 12$$

Do you agree with Milus that this is a correct way of obtaining the solution? If so, what mathematical principle is Milus using?

2. Katie said that Example 3 could be solved by letting $\frac{x}{4}$ equal the smaller number and x equal the larger number. Is Katie correct? If so, what equation would she write to solve the problem?

Developing Skills

In 3–36, solve and check each equation.

3. $7x = 10 + 2x$ **4.** $9x = 44 - 2x$ **5.** $5c = 28 + c$

6. $y = 4y + 30$ **7.** $2d = 36 + 5d$ **8.** $2\frac{1}{4}y = 1\frac{1}{4}y - 8$

9. $0.8m = 0.2m + 24$ **10.** $8y = 90 - 2y$ **11.** $2.3x + 36 = 0.3x$

12. $2\frac{3}{4}x + 24 = 3x$ **13.** $5a - 40 = 3a$ **14.** $5c = 2c - 81$

15. $x = 9x - 72$ **16.** $0.5m - 30 = 1.1m$ **17.** $4\frac{1}{4}c = 9\frac{3}{4}c + 44$

18. $7r + 10 = 3r + 50$ **19.** $4y + 20 = 5y + 9$ **20.** $7x + 8 = 6x + 1$

21. $x + 4 = 9x + 4$ **22.** $9x - 3 = 2x + 46$ **23.** $y + 30 = 12y - 14$

24. $c + 20 = 55 - 4c$ **25.** $2d + 36 = -3d - 54$ **26.** $7y - 5 = 9y + 29$

27. $3m - (m + 1) = 6m + 1$ **28.** $x - 3(1 - x) = 47 - x$ **29.** $3b - 8 = 10 + (4 - 8b)$

30. $\frac{2}{3}t - 11 = 4(16 - t) - \frac{1}{3}t$ **31.** $18 - 4n = 8 - 2(1 + 8n)$

32. $8c + 1 = 7c - 2(7 + c)$ **33.** $8a - 3(5 + 2a) = 85 - 3a$

34. $4(3x - 5) = 5x + 2(x + 15)$ **35.** $3m - 5m - 12 = 7m - 88 - 5$

36. $5 - 3(a + 6) = a - 1 + 8a$