Name _____   Date _____

In Exercises 1–5, find the value of b.

1. $2a + 3 = 5$ and $3b + 1 = 2a$

2. $a - 4 = -4$ and $2b = a$

3. $6 - 3a = 2 - 2a$ and $2b + a = 0$

4. $3a + 2 = 11$ and $2b + 1 = 2a$

5. $2a - 5 = 7$ and $b = 12 - a$

In Exercises 6–12, use the fact that there are 180 pennies in a pound of pennies, 90 nickels in a pound of nickels, 200 dimes in a pound of dimes, and 80 quarters in a pound of quarters.

6. John is saving money by placing all of his spare dimes in a bucket. The bucket, when half full, weighs 2 pounds. When empty the bucket weighed 0.2 pound. When the bucket is full, how much money in dimes will John have?

7. Angela has a bucket that is two-thirds full of quarters and weighs 1.75 pounds. When empty the bucket weighed 0.25 pound. When the bucket is full, how much money in quarters will Angela have?

8. Carrie has a bucket of nickels that is one-fourth full and weighs 2.8 pounds. When empty the bucket weighed 0.3 pound. When the bucket is full, how much money in nickels will Carrie have?

9. James has a jar weighing 12 pounds that is three-fourths full of pennies. The empty jar weighed 3.75 pounds. When the jar is full, how much money in pennies will James have?

10. Emma has one pound of quarters and one pound of dimes. How much money does Emma have in quarters and dimes combined?

11. Josie has 25 pounds of quarters and dimes mixed together. How much money does Josie have in quarters and dimes combined?

12. Luis has 12 pounds of pennies and nickels mixed together. He knows he has twice as many pennies as he does nickels. How much money in pennies and nickels combined does Luis have?