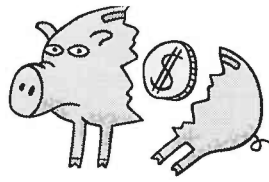


Coin Word Problems Systems of Equations



Solve the following problems on a SEPARATE SHEET of paper.

1. Sarah has 600 quarters and dimes in her piggy bank which totals \$123.75. How many quarters does she have? (Hint: Use cent values for each coin- quarters are 25 cents, 0.25.)
2. Mackenzie “accidentally” broke her piggy bank to find a combined total of 42 dimes and quarters. If the coins totaled \$8.25, how many dimes did she have in her piggy bank? How many quarters?
3. A coin bank contains \$17.00 in pennies and nickels. If there are 1140 coins in the bank, how many of them are nickels?
4. A jar of coins contains six times as many quarters as dimes. If the total amount of money is \$28.80, how many quarters and dimes are in the jar?
5. Lily cleaned the coin fountain at the mall and found 20 coins consisting of nickels and quarters. Her collection totaled to \$2.60. How many quarters did she find?
6. Nick has twelve more pennies than he has nickels. All together he has \$2.94. how many of each coin does he have?
7. John has 14 coins that have a total value of \$2.30. The coins are nickels and quarters. How many of each coin does he have?
8. Laura has \$0.95 in dimes and nickels. She has a total of 11 coins. How many of each coin does she have?
9. Principal Stern has 21 coins totaling to \$3.45. if he only has dimes and quarters, how many of each type does he have?
10. A coin collector has 31 dimes and nickels with a total value of \$2.40. How many of each coin do they have?

Coin Word Problems

-.10

1. $g + d = 600$
 $.25g + .10d = 123.75$

$$\begin{array}{r} - .10g - .10d = -60 \\ \underline{.25g + .10d = 123.75} \\ .15g = 63.75 \\ \boxed{g = 425} \end{array}$$

-.10

2. $d + g = 42$
 $.10d + .25g = 8.25$

$$\begin{array}{r} - .10d - .10g = -4.2 \\ \underline{.10d + .25g = 8.25} \\ .15g = 4.05 \\ \boxed{g = 27} \end{array}$$

$$d + 27 = 42$$

$$\boxed{d = 15}$$

-.01

3. $p + n = 1140$
 $.01p + .05n = 17.00$

$$\begin{array}{r} - .01p - .01n = -11.4 \\ \underline{.01p + .05n = 17} \\ .04n = 5.6 \\ \boxed{n = 140} \end{array}$$

4. $g = 6d$
 $.25g + .10d = 28.80$

$$\begin{array}{r} .25(6d) + .10d = 28.80 \\ 1.5d + .10d = 28.80 \\ 1.6d = 28.80 \\ \boxed{d = 18} \end{array}$$

$$g = 6(18) = \boxed{108 \text{ quarters}}$$

-.05

5. $n + g = 20$
 $.05n + .25g = 2.60$

$$\begin{array}{r} - .05n - .05g = -1 \\ \underline{.05n + .25g = 2.60} \\ .20g = 1.60 \\ g = 8 \end{array}$$

6. $p = n + 12$
 $.01p + .05n = 2.94$

$$\begin{array}{r} .01(n + 12) + .05n = 2.94 \\ .01n + .12 + .05n = 2.94 \\ .06n + .12 = 2.94 \\ .06n = 2.82 \\ n = 47 \end{array}$$

$$p = 47 + 12 = \boxed{59}$$

-.05

7. $(n + g = 14)$

$.05n + .25g = 2.30$

$-.05n - .05g = -.7$

$.05n + .25g = 2.30$

$.2g = 1.6$

$g = 8$

$n + g = 14$

$n = 6$

-.10

8. $(d + n = 11)$

$.10d + .05n = .95$

$-.10d - .10n = -1.1$

$.10d + .05n = .95$

$-.05n = -.15$

$n = 3$

$d + n = 11$

$d = 8$

-.10

9. $(d + g = 21)$

$.10d + .25g = 3.45$

$-.10d - .10g = -2.1$

$.10d + .25g = 3.45$

$.15g = 1.35$

$g = 9$

$d + g = 21$

$d = 12$

-.10

10. $(d + n = 31)$

$.10d + .05n = 2.40$

$-.10d - .10n = -3.1$

$.10d + .05n = 2.40$

$-.05n = -.7$

$n = 14$

$d + n = 31$

$d = 17$