

Question #9566 David paid \$9.50 for some 15 cent, 25 cent, and 45 cent stamps. He bought 38 stamps and the number of 25 cent stamps was 8 more than twice the number of 45 cent stamps. How many of each type did David buy?.

Solution. Denote the number of 25 cent stamps by x , 15 — by y and 45 by z . The condition implies $x + y + z = 38$, $x = 8 + 2z$ and $0.15y + 0.25x + 0.45z = 9.5$. Hence $y = 38 - z - 8 - 2z = 30 - 3z$ and $4.5 - 0.45z + 2 + 0.5z + 0.45z = 9.5$. So, $z = 6$ and $y = 12$, thus $x = 20$.

Answer The number of 15 cent is 12, 25 — 20, 45 — 6.