c = cent
d = dollar

check = d + c/100
cash = c + d/100

cash − 24.11 = 2 × check

$$c + \frac{d}{100} - 24{,}11 = 2d + c/50$$

$$100c + d - 2411 = 200d + 2c$$

$$98c = 199d + 2411$$

$$c = \frac{199}{98}d + \frac{2411}{98} > 0 \quad d = \frac{98c - 2411}{199} > 0$$

$$< 99 \qquad \text{is integer}$$

is integer

By trial & error (excel)
only one solution Exist: c = 51 cent
d = 13 dollar

Validation

cash: 13.51 $
− 24.11
27.02

check = 13.51 $
× 2
27.02

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