

### QUESTION

1. A patient with a long history of chronic kidney disease (CKD) is being treated with a diuretic. The patient's serum electrolyte levels are as follows:

Electrolyte	Level
Sodium (Na <sup>+</sup> )	135 mEq/L
Potassium (K <sup>+</sup> )	3.0 mEq/L
Calcium (Ca <sup>2+</sup> )	8.5 mg/dL
Magnesium (Mg <sup>2+</sup> )	0.8 mg/dL

2. The patient is also receiving a calcium supplement. The patient's serum calcium level is as follows:

Electrolyte	Level
Calcium (Ca <sup>2+</sup> )	10.0 mg/dL

3. The patient's serum magnesium level is as follows:

Electrolyte	Level
Magnesium (Mg <sup>2+</sup> )	0.8 mg/dL

4. The patient's serum sodium level is as follows:

Electrolyte	Level
Sodium (Na <sup>+</sup> )	135 mEq/L

### ANSWER

1. The patient's serum potassium level is low (3.0 mEq/L). The patient's serum calcium level is also low (8.5 mg/dL). The patient's serum magnesium level is low (0.8 mg/dL). The patient's serum sodium level is normal (135 mEq/L).

2. The patient's serum calcium level is normal (10.0 mg/dL).

3. The patient's serum magnesium level is low (0.8 mg/dL).

4. The patient's serum sodium level is normal (135 mEq/L).