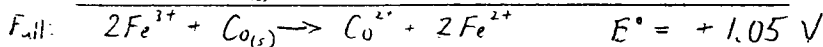
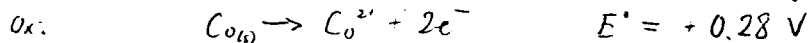
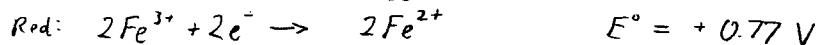
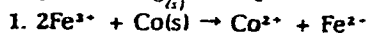
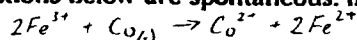
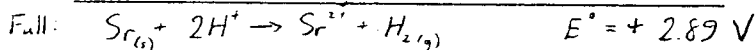
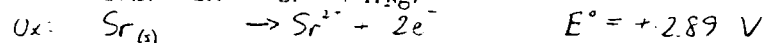
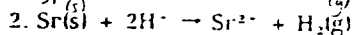
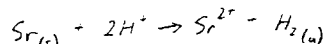


If the cell voltage for the sum of two half-reactions is positive, the net redox reaction will proceed spontaneously. Use a table of standard reduction potentials to predict whether the reactions below are spontaneous. In each case, show the addition of half-reactions and E° values.

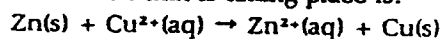


* spontaneous



* spontaneous

In an electrochemical cell, an oxidation-reduction reaction produces electrical energy. Identify the labeled parts of the cell that is shown in the figure by writing the corresponding letters into the blanks below. The reaction that is taking place is:



Voltmeter

G

Solution of copper(II)

B

Salt bridge

C

Solution of zinc(II)

D

Anode

E

External wire

F

Cathode

A

