

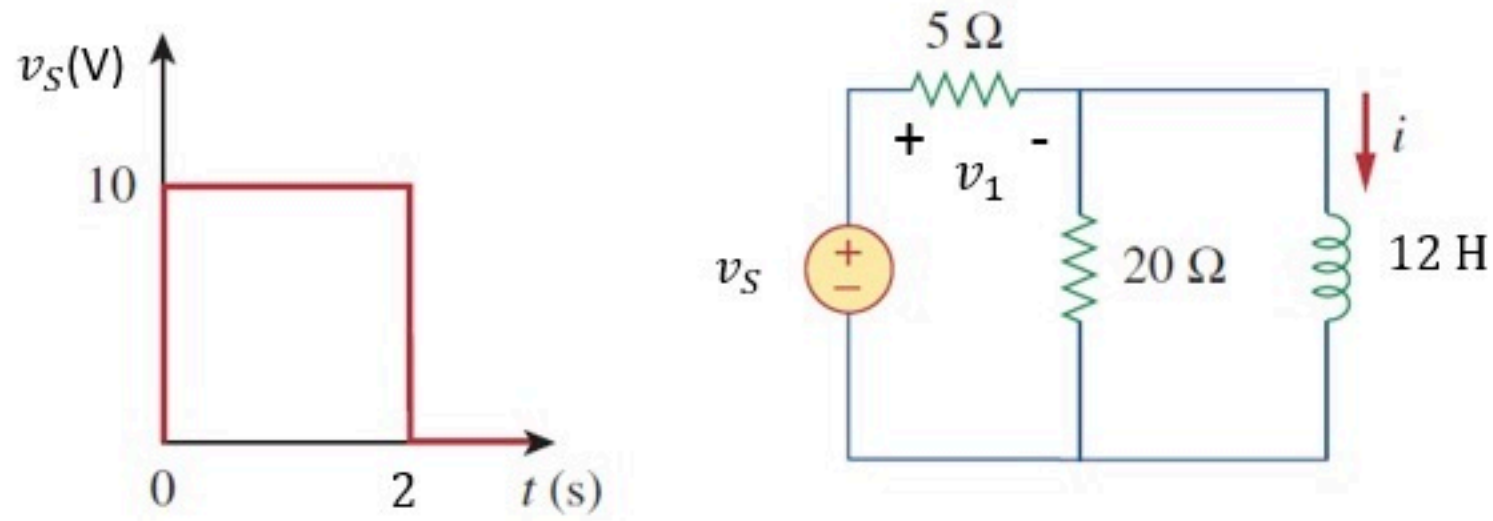
PP First order circuits 011

Unlimited Attempts.

The voltage source behaves as shown (and assume it has been zero for a long time for $t < 0$).

Find $v_1(t) = D$ for $t = 0^-$
 $= A_1 \cdot e^{-t/\tau_1} + B_1$ for $0 < t < 2$ s
 $= A_2 \cdot e^{-(t-2)/\tau_2} + B_2$ for $2 \leq t$

Note, for your calculations, use: $e^{-1/1.5} \approx 0.5$



Given Variables:

...

Calculate the following:

D (V) :

0

✓

A1 (V) :

-8

✓

B1 (V) :

10

✓

tau1 (s) :

3

✓

A2 (V) :

4

✓

B2 (V) :

0

✓

tau2 (s) :

3

✓

Hint: Find the result of the first transition first.