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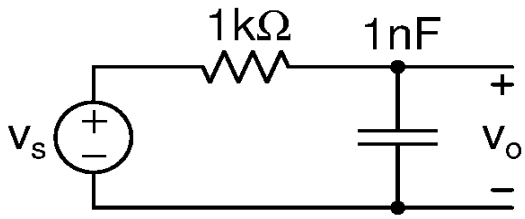
Unit 14 - Week 12: Direct calculation of steady state response from equivalent components

Assignment 12

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-12-09, 23:59 IST.

1)



In the circuit above, $v_s(t) = 6\cos(2\sqrt{2}\cdot 10^6 t)$ V. In steady state $v_o = V_p \cos(\omega t + \phi)$. Determine V_p and ϕ.

Value of V_p:

(The answer must be **in volts (V)**. Round off fractional answers to 1 decimal place.)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 1.9,2.1

1 point

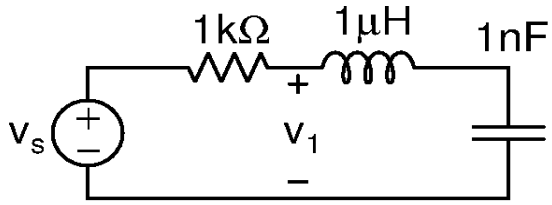
2) Value of ϕ:

(The answer must be **in degrees (°)**. Round off fractional answers to 1 decimal place.)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) -71,-70

1 point

3)



In the circuit above, $v_s(t) = 5\sin(10^6 t)$ V. In steady state $v_1 = V_p \cos(\omega t + \phi)$. Determine V_p and ϕ.

Value of V_p:

(The answer must be **in volts (V)**. Round off fractional answers to 1 decimal place.)

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Range) 3.4,3.6

1 point

4) Value of ϕ:

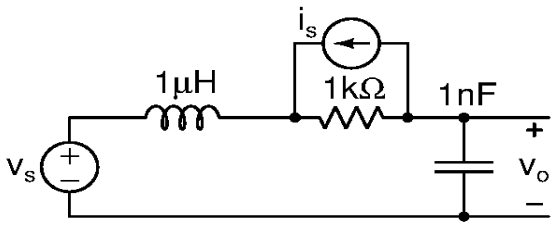
(The answer must be **in degrees (°)**. Round off fractional answers to 1 decimal place.)

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Range) -136,-134

1 point

5)



In the circuit above, $v_s(t) = 3\cos(10^6 t)$ V and $i_s(t) = 4\sin(10^6 t)$ mA. In steady state $v_o = V_p \cos(\omega t + \phi)$. Determine V_p and ϕ.

Value of V_p:

(The answer must be **in volts (V)**. Round off fractional answers to 1 decimal place.)

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Range) 3.4,3.6

1 point

6) Value of ϕ:

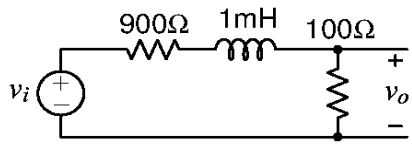
(The answer must be **in degrees (°)**. Round off fractional answers to 1 decimal place.)

No, the answer is incorrect.
Score: 0

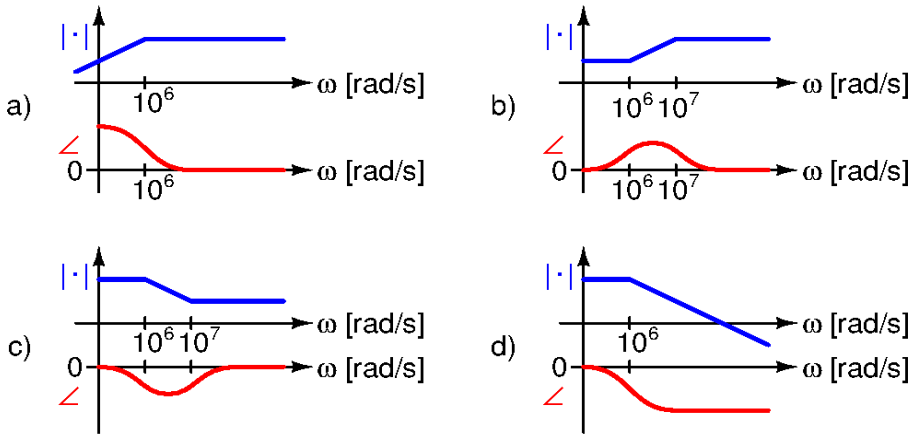
Accepted Answers:
(Type: Range) 7.9,8.2

1 poin

7) *1 poin*



Choose the magnitude/phase plot corresponding to v_o/v_i above.

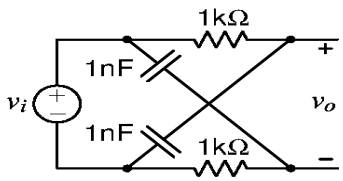


- a
- b
- c
- d

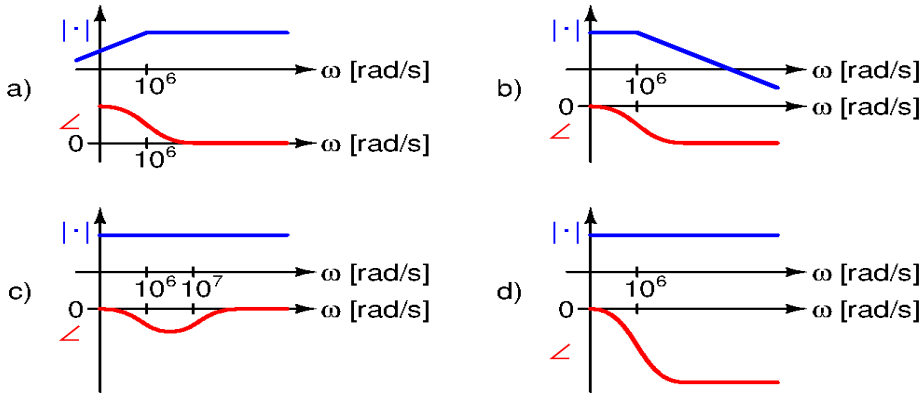
No, the answer is incorrect.
Score: 0

Accepted Answers:
d

8) *1 poin*



Choose the magnitude/phase plot corresponding to v_o/v_i above.

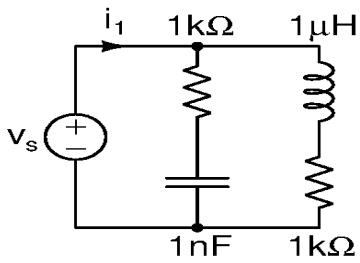


- a
- b
- c
- d

No, the answer is incorrect.
Score: 0

Accepted Answers:
d

9)



In the circuit above, $v_s(t) = 4\sin(10^6 t)$ V. In steady state $i_1 = I_p \cos(\omega t + \phi)$. Determine V_p and ϕ.

Value of I_p:

(The answer must be **in milliamperes (mA)**. Round off fractional answers to 1 decimal place.)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 6.2,6.4

1 point

10) Value of ϕ:

(The answer must be **in degrees (°)**. Round off fractional answers to 1 decimal place.)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) -71.7,-71.4

1 point