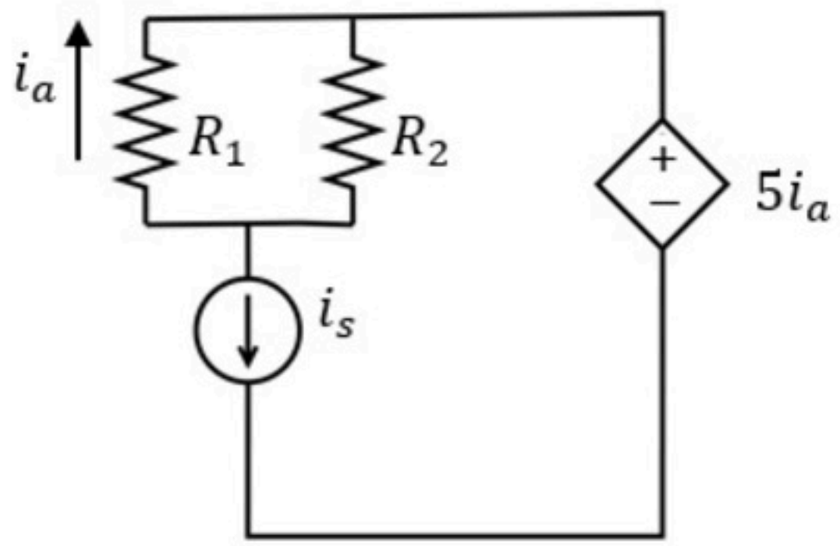
Basic analysis 005

Problem has been graded.

Find the power supplied by the dependent source.



Given Variables:

R1 : 5 ohm

R2 : 20 ohm

is : 5 A

Calculate the following:

P (W) :

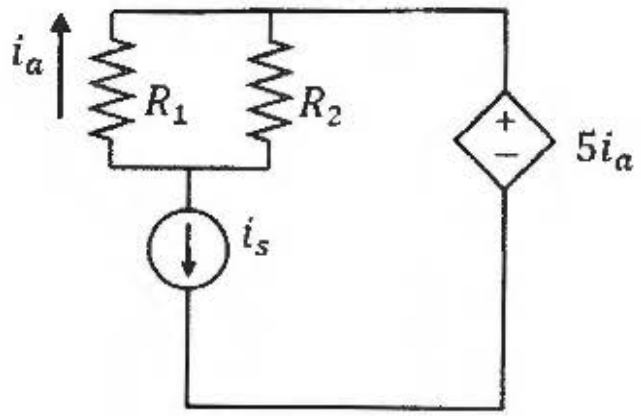
> Hint: Use current divider

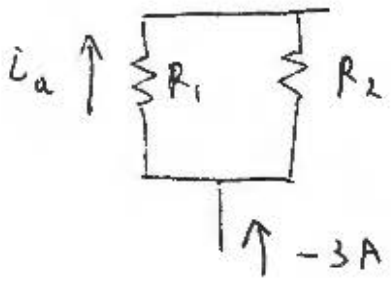
Find the power supplied by the dependent source.

R1 = 14 Ω

R2 = 7 Ω

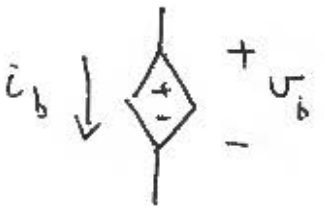
is = 3 A





CURRENT DIVIDER

$$i_a = (-3)\cdot\frac{R_2}{R_1+R_2} = -3\cdot\frac{7}{21} = -1A$$



$$v_b = 5i_a = -5V$$

$$i_b = -i_s = -3A$$

$$P = v_b\, i_b = 15\,W$$ RECEIVED (PASSIVE SIGN CONVENTION)

$P = -15W$ SUPPLIED