This book has permission to use the "N&K method of COLORS".

20) Question: Julie bought a dress at a sale. The sale resulted in a 40 percent discount off the original price. The total amount charged to her credit card was "d" dollars. It included a 7% sales tax on the sale price (i.e. the price after the 30% discount). Which of the choices given below is the original price of the dress in terms of "d".

A) 0.60d

B) $\frac{d}{0.60}$

C) 110

D) 120

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For speed, while solving something similar, only THINK the words in blue; WRITE only the words in other COLORS.

Given: 1) Julie bought a dress at a 40 percent discount off the original price.
2) The total amount charged to her credit card was "d" dollars.
3) The total amount charged to her credit card included a 7% sales tax on the sale price.

Solve: Which of the choices given above is the original price of the dress in terms of "d"?

Road Map of Solution:
First Step: Find Sale Price in terms of Original Price.
Second Step: Find amount charged on credit card in terms of Sale Price.
Third Step: Find amount charged on credit card in terms of Original Price.
Fourth Step: Rewrite the equation created for 3rd step to show the original price of the dress in terms of "d".

First Step: Find Sale Price in terms of ..... Original Price.
Sale Price is equal to 40% discount off the Original Price
Sale Price = 40% less than Original Price
Needs simple explanation.
Sale Price = Original Price - 40% of the Original Price
Sale Price = Original Price - 40% × Original Price
Sale Price = (1 - 40%) Original Price
Sale Price = (1 - $40\times\left(\frac{1}{100}\right)$ *) Original Price*
Sale Price = (1 - $\frac{40\times 1}{100}$ *) Original Price*
Sale Price = (1 - $\frac{40}{100}$ *) Original Price*
Sale Price = (1 - 0.40) Original Price
Sale Price = (0.60) Original Price
Sale Price = 0.60 × Original Price ..... equation#1

Second Step: Find amount charged on credit card in terms of Sale Price.
The amount charged to her credit card = Sale Price + Sales Tax
d = Sale Price + Sales Tax
d = Sale Price + 7% of Sale Price ...Based on Third Given Statement,
d = Sale Price + 7% × Sale Price
d = (1 + 7%) Sale Price
d = (1 + $7\times\left(\frac{1}{100}\right)$*) Sale Price*
d = (1 + $\left(\frac{7}{100}\right)$*) Sale Price*
d = (1 + 0.07) Sale Price
d = (1.07) Sale Price ..... equation#2