Question

You require 20 gel-ink pens, STORE XXX sells these pens at R9.50 each, while store YYY sells them at R10.00 each, but have 6% sale on all items. Further, store WWW sells these pen at the R19.00 each with a buy one get one free special, Finally store MMM sells the pen at R14.50 each with a third off the total price which store offers the best deal?

Solution

Store XXX sells pens at a price 9.5:

$$p_x = 9.5$$

In store YYY price of one pen including sale will be

$$p_y = 10 \cdot (1 - 0.06) = 10 \cdot 0.94 = 9.4$$

If I am buying two pens in store WWW, price of each one pen for me will be

$$p_w = \frac{19}{2} = 9.5$$

In store MMM price of one pen including their offer will be

$$p_m = 14.5 \cdot \frac{2}{3} = \frac{29}{3} = 9.67$$

Minimal price per one pen is in store YYY.

Answer: store YYY offers the best deal.