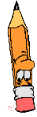2023

Quiz Thursday

1) A three wheeler is on sale for 20% off the regular price of $1500. What is the sale price?   could I take it a step further...what is the price with tax?

Save = 20% of Cost
= 0.20 × 1500
= $300

Tax = 15% × Cost
= 0.15 × 1200
= $180   add on

Sale Price = Cost − Saving
$1500 − 300
= $1200

Cost w̄ tax
= 1200 + 180 = $1380

2) A backpack is on sale for 60% off. If the amount discounted is $16.14, what is the regular price?

Save = % × Reg
16.14 = 60% of Reg

16.14 = 0.60 × n
÷0.60   ÷0.60

$26.90 = n

The regular price of the backpack is $26.90.

3) The population of a village was 26 000 people in the year 2019. Due to very few job opportunities 15% of the people move away in 2020. What was the population at the end of 2020?

Move = 15% of people
= 0.15 × 26000
Move = 3900

$$P_{op}^{New} = Reg − Move$$
= 26000 − 3900
= 22 100

The new population is 22 100.

$$60\% \quad \text{of} \quad 70 = 42$$

$$10\% \quad \text{of} \quad 70 = 7$$

$6\times$ $\times 6$

WARM UP GRADE 8

Quiz _____

1) A three wheeler is on sale for 20% off the regular price of $1500. What is the sale price?   could I take it a step further...what is the price with tax?

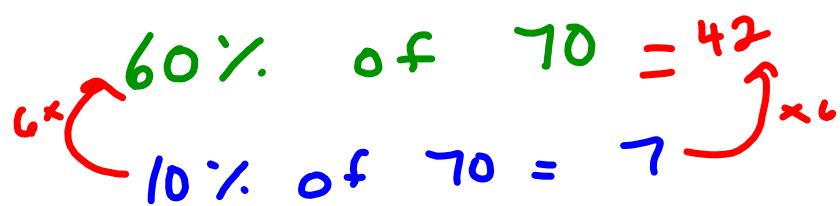2) A backpack is on sale for 60% off. If the amount discounted is $16.14, what is the regular price?

3) The population of a village was 26 000 people in the year 2019. Due to very few job opportunities 15% of the people move away in 2020. In 2021 the population decreased by 5% that of 2020, what was the population at the end of 2021?

WARM UP GRADE 8

1) A three wheeler is on sale for 20% off the regular price of $1500. What is the sale price?   could I take it a step further...what is the price with tax?
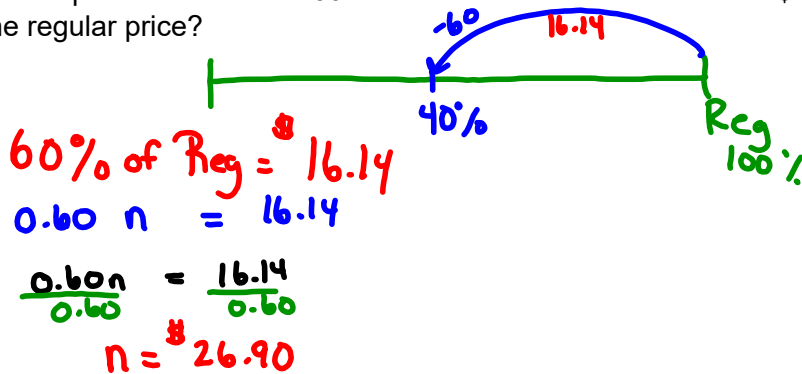
Step 1)
Save = 20% of Price
= 0.20 × 1500
= $300

Step 2)
SalesPrice
= Price − Saved
= $1500 − $300
= $1200

Step 3
Tax = 15% of Price
= 0.15 × 1200
= $180

Step 4
Cost with tax = Price + tax
= $1200 + $180
= $1380

2) A backpack is on sale for 60% off. If the amount discounted is $16.14, what is the regular price?

-60   16.14
40%   Reg 100%

60% of Reg = $16.14
0.60 n = 16.14

$$\frac{0.60n}{0.60} = \frac{16.14}{0.60}$$

n = $26.90

3)
Similar to quiz question

The population of a village was 26 000 people in the year 2011. Due to very few job opportunities 15% of the people move away in 2012. What was the population at the end of 2012?

Move away = 15% of people
= 0.15 × 26000
move away = 3900

New Population = 26000 − 3900
= 22 100

The new population for 2012 is 22 100.

8(i) a) Discount   20% of 89.99
$$0.2 \times 89.99$$
$$18$$

b) Sale Price = Reg − Disc
$$= 89.99 - 18$$
$$= 71.99$$

c) HST   15% of 71.99
$$0.15 \times 71.99$$
$$10.80$$

Total Cost = Price + tax
$$71.99 + 10.80$$
$$82.79$$

(ii) Disc   45% of 120
$$0.45 \times 120$$
$$54$$

Sale Price = Price − Disc
$$= 120 - 54$$
$$= 66$$

HST   15% of 66
$$0.15 \times 66$$
$$9.90$$

Total Cost = Price + tax
$$= 66 + 9.90$$
$$= 75.90$$

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10.

Choose A 30% off

Disc 30% of 25.00   Sale Price = 25 − 7.50
       0.3 × 25   = 17.50
          7.5

Choose B $40 for 2 DVD
            (or $20 each)

Choose A is a better deal, it costs less.

11. Amt of Dec = 18.98 − 11.39
                = 7.59

% Dec = $\dfrac{\text{Amt of Dec}}{\text{Orig Amt}} \times 100\%$

      = $\dfrac{7.59}{18.98} \times 100\%$

      = $0.40 \times 100\%$

      = 40%

b) Sale Price 11.39

HST = 15% of 11.39
    = 0.15 × 11.39
    =   1.71

Total Cost = 11.39 + 1.71
             $ 13.10

12. $\frac{1}{2}$ of 30 = \$15

1st Disc   25% of 30
            0.25×30
            7.50

Sale Price   30 − 7.50
              22.50

2nd Disc   25% of 22.50
            0.25×22.50
            5.63

New Sale Price   22.50 − 5.63
                  16.87

So **ND** the T-shirt is not 50% off, if it was 50% off, it would be \$15 not \$16.87

13.   Sale 20% off,   Sale Price = \$35.96

Disc 20% of reg   n = reg price
       $0.2n$

Sale Price = Reg − Disc
           = $1n - 0.2n$
           = $0.8n$

$35.96 = 0.8n$

$\dfrac{35.96}{0.8} = \dfrac{0.8n}{0.8}$

$44.95 = n$

Sale Price = Reg − Disc
           = 100% − 20%
           = 80%
             of reg price

14. 15% Disc   Disc = 0.15×129.99
                   = 19.50

Sale Price = $129.99 - 19.50$
           = 110.49

HST   15% of 113.09
       0.15×113.09
              16.96

Sale
Price
with taxes $113.09 + 16.96$
                    130.05

Price without taxes 129.99

It is better to get a 15% discount than it is to have no taxes, because you pay the taxes on a lower amount.

% of reg price = amt of disc

15. 33% of reg price is 28.38
    $0.33n = 28.38$
    $\dfrac{0.33n}{0.33} = \dfrac{28.38}{0.33}$
    $n = 86.$

The regular price was 86.

b) Sale Price $86 - 28.38$
                    57.62

HST   15% of 57.62
            8.64

Total
Cost $57.62 + 8.64$
           62.26

16. Disc   30% of 75   Customer 1

    0.3 × 75

    22.50

Sale Price   75 − 22.50

    52.50

HST   15% of 52.50

    0.15 × 52.50

    7.88

Total Cost   52.50 + 7.88

    60.38

Customer 2   − Add tax then find disc

HST   15% of 75

    0.15 × 75

    11.25

Price with tax   75 + 11.25

    86.25

Disc   30% of 84.75

    0.3 × 84.75

    25.43

Sale Price   84.75 − 25.43

    59.32

The price is the   60.38 − 59.32 = 1.06 diff

but the second way is wrong

17. Store A

Disc 15% of 45.99

0.15 x 45.99

6.89

SP = Reg - Disc

= 45.99 - 6.89

= 39.10

Store B

Disc 20% of 49.99

0.2 x 49.99

10.

SP = Reg - Disc

= 49.99 - 10

= 39.99

Store A has the better deal, you would save 89¢

Class/Homework

Quiz ___Thursday___   % $\xrightarrow{\div 100}$ Decimal

Homework pg. 263 # 4-12

Dont
Do 11

35% Disc, Amt of Disc $42
          what is reg price

35% of Reg Pr is Amt of Disc

35% of n = 42

0.35n = 42

$\dfrac{0.35n}{0.35} = \dfrac{42}{0.35}$

n = 120