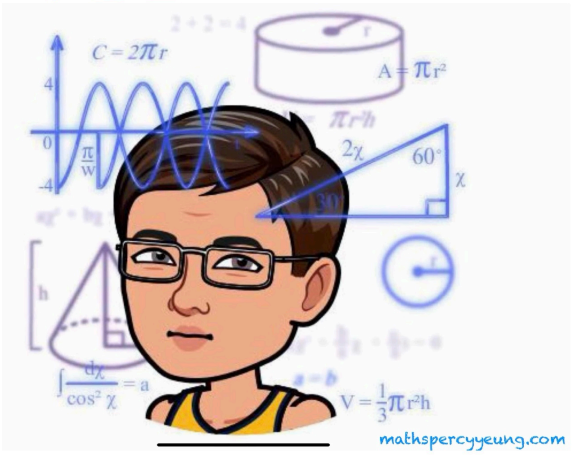
SFX F2 Ratio and rate quiz

Name: _____ ( ) Class: _____ Date: _____

Time: 10 minutes Marks: _____ / 6



Section Quiz 1.2B

1. (a) If $x : y = 4 : 5$ and $x : z = 4 : 9$, find $x : y : z$.

   (b) If $x : y = 3 : 8$ and $y : z = 4 : 1$, find $x : y : z$.

   (c) If $x : z = 2 : 5$ and $y : z = 3 : 4$, find $x : y : z$.

2. If $a : c = 5 : 6$ and $b : c = 4 : 3$, find $(2a + c) : (3b - a)$.

3. The total age of Ada, Herman and Ivan is 78. It is given that the ratio of Ada's age to Herman's age is 3 : 4 and the ratio of Ada's age to Ivan's age is 1 : 2.

   (a) Find the ratio of Ada' age to Herman's age to Ivan's age.

   (b) Who is the eldest? How old is he/she?

4. A, B and C are three numbers such that $A : C = 4 : 3$ and $B : C = 3 : 4$.

   (a) Find $A : B : C$.

   (b) If the sum of A and B is 100, find $B + C$. (Bonus Question)

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Section Quiz 1.1

1. The price of 3 identical bottles of canola oil is \$108. If the volume of each bottle of canola oil is 900 mL, find the price rate of the canola oil in
   (a) \$/bottle,
   (b) \$/L.

2. A car travels 135 km in 2.5 hours.
   (a) Find the average speed of the car in the following units.
      (i) km/h (ii) m/s
   (b) If the average speed of the car remains unchanged, can the car travel 40 km in 45 minutes? Explain your answer.

3. In a bank, 150 NZD (New Zealand dollars) can be exchanged for 780 HKD (Hong Kong dollars).
   (a) Find the exchange rate in HKD/NZD.
   (b) Find the exchange rate in NZD/HKD correct to 3 decimal places.
   (c) How much HKD can be exchanged for 125 NZD?
   (d) How much NZD can be exchanged for 2730 HKD?

4. A man jogs from point P to point Q at an average speed of 8 km/h and then jogs from point Q to point R at an average speed of 10 km/h. It is given that the man jogs 15 km in 105 minutes for the whole journey.
   (a) How long does it take the man to jog from point P to point Q in minutes?
   (b) The man claims that the distance between point P and pont Q is double of that between point Q and poitn R. Do you agree? Explain your answer. (Bonus Question)