MATH

Secondary 1 Math EOY Revision

SEC 2 MATH

Answer **all** the questions.

1. The number of people in a concert is 75 000, correct to the nearest thousand.

   a) Write down the maximum number of people that could be in the concert.

   Answer_____ [1]

   b) Write down the minimum number of people that could be in the concert.

   Answer_____ [1]

2. Factorise the following expressions.

   a) $2xy - 4x^2 + 2x$

   Answer_____ [1]

   b) $n(m + 2) - 5(m + 2)$

   Answer_____ [1]

3. Choose a symbol from the list below to make a correct statement.

$$<\qquad=\qquad>$$

a) $-5\ \rule{2cm}{0.4pt}\ 4$

Answer_____ [1]

b) $\frac{2}{3}\ \rule{2cm}{0.4pt}\ 66\%$

Answer_____ [1]

c) $0.\dot{2}\dot{7}\ \rule{2cm}{0.4pt}\ \frac{3}{11}$

Answer_____ [1]

4. a) By rounding each number correct to 1 significant figure, estimate $\dfrac{5.04\times19.86}{4.97}$.

Answer_____ [1]

b) **Without using a calculator**, estimate $\dfrac{\sqrt{50.4}\times\sqrt{101.5}}{\sqrt{4.1}}$.

Answer_____ [2]

5. a) Express the ratio $3\frac{1}{5} : 24\%$ in its simplest form.

Answer_____ : _____ [2]

   b) Express 860 g as a percentage of 5.6 kg.

Answer_____ % [2]

6. Solve the following equations.

a) $\dfrac{x-7}{4} = 9$

Answer $x =$ _____ [2]

b) $\dfrac{y}{2} - \dfrac{3y+1}{4} = 5$

Answer $y =$ _____ [3]

c) $6(z+3) - 7(2z-5) = 3(5z-4) - 4$

Answer $z =$ _____ [3]

7. Perlyn bought 30 red and green pens.

a) If there are x red pens, write down in terms of x, the numbers of green pens.

Answer_____green pens [1]

The red pens are sold at 50¢ each and the green pens are sold at 40¢ each.
The total bill for the pens was $13.00.

b) Write down an expression in x for,

i) the cost of the red pens,

Answer $_____ [1]

ii) the cost of the green pens.

Answer $_____ [1]

c) Form an equation in x and solve it to find the number of green pens.

Answer_____green pens [3]

8. A triathlete swims 750 m at an average speed of 1.5 m/s, cycles 20 km at an average speed of 30 km/h and runs 5 km in 25 minutes.

a) Find the time the triathlete takes to swim 750 m. Give your answer in minutes and seconds.

Answer_____ min _____ sec [2]

b) Find the average speed, in km/h, of the triathlete for the total distance of the race. Give your answer correct to 1 decimal place.

Answer_____km/h [3]

9. The table below shows the parking charges at Changi Airport Terminal 1.

Terminal 1 /Jewel Car Park Charges
Short-term Parking (B2M and B2)
First 90 mins: $0.04 per minute
Subsequent 30 mins or part thereof: $5 per 30 mins
General Parking (B3 and B5)
$0.04 per minute

a) Joseph parked his car at B2M level at $6\!:\!30$ pm and paid $8.60 for parking charges upon leaving the car park. What is the latest possible time that he left the car park? Explain your answer with working.

Answer_____ [2]

b) Pearlyn is considering whether to park her car at B2 or B3 at Changi Airport Terminal 1. She intends to stay at the airport for 2.5 hours. Which is a cheaper option? Explain your answer with working.

Answer   She should park at _____ because _____

_____

_____ [3]