Rates: 10 practice questions

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Name: _____ Date: _____

Attempt all questions and show your working. Suggested time: 15 to 20 minutes.

Section A: Consolidating (Questions 1-4)

Question 1

A car travels 240 km in 3 hours. Find its average speed in kilometres per hour.

Question 2

Sam earns $156 for 8 hours of work. Find his hourly rate of pay.

Question 3

A tap fills a 60 L laundry tub in 4 minutes. Find the rate of flow in litres per minute.

Question 4

Write each of these as a rate in simplest form.

(a) 300 words typed in 5 minutes

(b) $45 for 3 kg of cherries

Section B: Standard (Questions 5-10)

Question 5

A supermarket sells yoghurt in two sizes: a 500 g tub for $3.20 and a 1 kg tub for $5.90.

(a) Find the price per 100 g for each tub.

(b) Which tub is the better buy?

Question 6

Convert 72 km/h to metres per second.

Question 7

Convert 15 m/s to kilometres per hour.

Question 8

Priya counts 18 heartbeats in 15 seconds.

(a) What is her heart rate in beats per minute?

(b) At this rate, how many times will her heart beat in 1 hour?

Question 9

A car uses 42 L of petrol to travel 600 km.

(a) Find its fuel consumption in litres per 100 km.

(b) At this rate, how much petrol will it use to travel 250 km?

Question 10

A hose fills a garden pond at a constant rate of 2.5 litres per minute. Copy and complete the table.

Time (minutes)	**4**	**10**	**?**	**30**
Volume (litres)	?	?	50	?

Rates: answers

Question 1

Answer: 80 km/h (240 ÷ 3)

Question 2

Answer: $19.50 per hour (156 ÷ 8)

Question 3

Answer: 15 L/min

Question 4

Answer: (a) 60 words per minute (b) $15 per kg

Question 5

Answer: (a) 500 g tub: 64 cents per 100 g; 1 kg tub: 59 cents per 100 g (b) the 1 kg tub

Question 6

Answer: 20 m/s (72,000 m ÷ 3600 s)

Question 7

Answer: 54 km/h (15 × 3600 ÷ 1000)

Question 8

Answer: (a) 72 beats per minute (18 × 4) (b) 4320 beats

Question 9

Answer: (a) 7 L per 100 km (b) 17.5 L

Question 10

Answer: Volumes: 10, 25, 75 litres; missing time: 20 minutes