

PENYELESAIAN LENGKAP

PRAKTIS 9

Praktis Formatif

1 Jarak yang dilalui

Distance travelled

$$= 30 \times \frac{43}{60}$$

$$= 21.5 \text{ km}$$

Jawapan/Answer: **B**

2 (a) Lori itu bergerak sejauh km dalam masa 1 jam.

The lorry travels a distance of km in a time of 1 hour.

(b) Kanak-kanak itu boleh berjalan sejauh 10 m dalam

masa minit.

The little child can walk a distance of 10 m in a time of minute.

(c) Burung itu terbang sejauh m dalam masa

s.

The bird flies for a distance of m in a time of

s.

3 Bala, Yunus, Nasir, Elmi, Sukri, Chew

4 (a) Laju tak seragam/*Non-uniform speed*

(b) Laju seragam/*Uniform speed*

5 (a) Laju seragam. Motosikal itu bergerak melalui jarak 5 km dalam selang masa 10 minit.

Uniform speed. The motorcycle travels through a distance of 5 km in time intervals of 10 minutes.

(b) Laju tak seragam. Lori itu bergerak melalui jarak-jarak berlainan dalam selang masa 20 saat.

Non-uniform speed. The lorry travels through different distances in time intervals of 20 seconds.

6 (a) Laju seragam/*Uniform speed*

(b) Laju tak seragam/*Non-uniform speed*

7 (a) (i) Laju teksi dari stesen teksi ke stesen minyak
Speed of taxi from taxi station to petrol kiosk

$$= \frac{200}{2}$$

$$= 100 \text{ km/j}$$

$$100 \text{ km/h}$$

(ii) Laju dari stesen minyak ke bandar

Speed from petrol kiosk to town

$$= \frac{120}{1.5}$$

$$= 80 \text{ km/j}$$

$$80 \text{ km/h}$$

(b) Teksi itu tidak bergerak dengan laju seragam.
The taxi is not travelling with uniform speed.

8 (a) Laju kura-kura

Speed of tortoise

$$= \frac{90}{9}$$

$$= 10 \text{ cm/s}$$

(b) Laju pelari

$$= \frac{1.6 \text{ km}}{20 \text{ minit}}$$

$$= 0.08 \text{ km/minit}$$

$$= 0.08 \times 60 \text{ km/j}$$

$$= 4.8 \text{ km/j}$$

Speed of runner

$$= \frac{1.6 \text{ km}}{20 \text{ minutes}}$$

$$= 0.08 \text{ km/minute}$$

$$= 0.08 \times 60 \text{ km/h}$$

$$= 4.8 \text{ km/h}$$

9 (a) Jarak yang dilalui

Distance travelled

$$= 15 \times 4$$

$$= 60 \text{ m}$$

(b) Jarak yang dilalui

Distance travelled

$$= 70 \times \frac{90}{60}$$

$$= 105 \text{ km}$$

(c) Jarak yang dilalui

Distance travelled

$$= 2 \times \frac{3}{4}(60)$$

$$= 90 \text{ km}$$

10 (a) Masa yang diambil

Time taken

$$= \frac{418}{110}$$

$$= 3.8 \text{ jam} / 3.8 \text{ hours}$$

$$= 3 \text{ jam } 48 \text{ minit} / 3 \text{ hours } 48 \text{ minutes}$$

(b) Masa yang diambil

Time taken

$$= \frac{320}{64}$$

$$= 5 \text{ jam} / 5 \text{ hours}$$

(c) Masa yang diambil

Time taken

$$= \frac{185}{74}$$

$$= 2\frac{1}{2} \text{ jam} / 2\frac{1}{2} \text{ hours}$$

11 (a) Masa

Time

$$= \frac{75}{50}$$

$$= 1.5 \text{ jam}$$

$$1.5 \text{ hours}$$

(b) Laju purata
Average speed

$$= \frac{72}{1.2}$$

$$= 60 \text{ km/j}$$

$$60 \text{ km/h}$$

(c) Jarak yang dilalui
Distance travelled

$$= 75 \times 2$$

$$= 150 \text{ km}$$

(d) Laju purata
Average speed

$$= \frac{126}{1.8}$$

$$= 70 \text{ km/j}$$

$$70 \text{ km/h}$$

12 (a) $21 \text{ m/s} = \frac{21 \text{ m}}{1 \text{ s}}$

$$= \frac{\frac{21}{1000} \text{ km}}{\frac{1}{3600} \text{ j/h}}$$

$$= \frac{21}{1000} \times 3600 \text{ km/j/km/h}$$

$$= 75.6 \text{ km/j}$$

$$75.6 \text{ km/h} \quad [\checkmark]$$

(b) $42 \text{ cm/minute} = \frac{42 \text{ cm}}{1 \text{ minute/minute}}$

$$= \frac{420 \text{ mm}}{60 \text{ s}}$$

$$= 7 \text{ mm/s} \quad [\checkmark]$$

(c) $54 \text{ km/j} = \frac{54 \text{ km}}{1 \text{ j/h}}$

$$= \frac{54000 \text{ m}}{3600 \text{ s}}$$

$$= 15 \text{ m/s} \quad [\times]$$

(d) $800 \text{ m/minute} = \frac{800 \text{ m}}{1 \text{ minute/minute}}$

$$= \frac{0.8 \text{ km}}{\frac{1}{60} \text{ j/h}}$$

$$= 0.8 \times 60 \text{ km/j}$$

$$= 48 \text{ km/j}$$

$$48 \text{ km/h} \quad [\times]$$

13 Jumlah jarak yang dilalui
Total distance travelled

$$= 3800 + 2100 + 2500$$

$$= 8400 \text{ m}$$

$$= 8.4 \text{ km}$$
 Jumlah masa yang diambil
Total time taken

$$= 42 + 30 + 48$$

$$= 120 \text{ minit}$$

$$120 \text{ minutes}$$

Laju purata
Average speed

$$= \frac{8.4}{120}$$

$$= 0.07 \text{ km/minit}$$

$$0.07 \text{ km/minute}$$

Laju purata
Average speed

$$= \frac{8.4}{2}$$

$$= 4.2 \text{ km/j}$$

$$4.2 \text{ km/h}$$

14 (a) Jarak/Distance PQ

$$= 90 \times 1\frac{1}{3}$$

$$= 120 \text{ km}$$
 Jarak/Distance PR

$$= 120 + 80$$

$$= 200 \text{ km}$$

(b) Jumlah masa yang diambil dari P ke R
Total time taken from P to R

$$= 1\frac{1}{3} + \frac{2}{3}$$

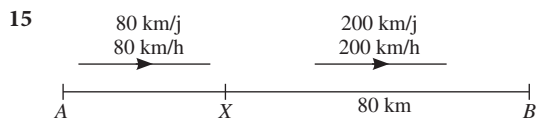
$$= 2 \text{ jam/hours}$$

Laju purata/Average speed

$$= \frac{200}{2}$$

$$= 100 \text{ km/j}$$

$$100 \text{ km/h}$$



Jarak AX
Distance AX

$$= 80 \times 0.5$$

$$= 40 \text{ km}$$

Masa yang diambil untuk bergerak dari X ke B
Time taken to travel from X to B

$$= \frac{80}{200}$$

$$= 0.4 \text{ j}$$

$$0.4 \text{ h}$$

Jumlah jarak yang dilalui
Total distance travelled

$$= 40 + 80$$

$$= 120 \text{ km}$$

Jumlah masa yang diambil
Total time taken

$$= 0.5 + t + 0.4$$

$$= t + 0.9$$

$$\frac{120}{t + 0.9} = 60$$

$$120 = 60(t + 0.9)$$

$$120 = 60t + 54$$

$$66 = 60t$$

$$t = 1.1$$

Jawapan/Answer: A

16 Pecutan
Acceleration

$$= \frac{15 - 10}{20}$$

$$= \frac{5}{20}$$

$$= \frac{1}{4} \text{ m/s}^2$$

Jawapan/Answer: **B**

17 (a) Laju teksi sewa itu 2 m/s dalam s.
The speed of the chartered taxi 2 m/s in s.

(b) Laju basikal itu km/j dalam minit.
The speed of the bicycle km/h in minute.

18 (a) (i) Pecutan Acceleration

$$= \frac{(90 - 72) \text{ km/j}}{10 \text{ s}} = \frac{(90 - 72) \text{ km/h}}{10 \text{ s}}$$

$$= \frac{18 \text{ km/j}}{10 \text{ s}} = \frac{18 \text{ km/h}}{10 \text{ s}}$$

$$= 1.8 \text{ km/j/s} = 1.8 \text{ km/h/s}$$

(ii) Pecutan Acceleration

$$= \frac{(80 - 72) \text{ km/j}}{10 \text{ s}} = \frac{(80 - 72) \text{ km/h}}{10 \text{ s}}$$

$$= \frac{8 \text{ km/j}}{10 \text{ s}} = \frac{8 \text{ km/h}}{10 \text{ s}}$$

$$= 0.8 \text{ km/j/s} = 0.8 \text{ km/h/s}$$

Kereta dalam situasi (i) bergerak dengan pecutan yang lebih tinggi.
The car in situation (i) travels with the higher acceleration.

(b) (i) Pecutan/Acceleration

$$= \frac{24 - 20}{30}$$

$$= \frac{4}{30}$$

$$= \frac{2}{15} \text{ m/s}^2$$

(ii) Pecutan/Acceleration

$$= \frac{24 - 20}{15}$$

$$= \frac{4}{15} \text{ m/s}^2$$

Kereta dalam situasi (ii) bergerak dengan pecutan yang lebih tinggi.
The car in situation (ii) travels with the higher acceleration.

19 (a) Pecutan/Acceleration

$$= \frac{9 - 5}{10}$$

$$= \frac{4}{10}$$

$$= 0.4 \text{ m/s}^2$$

(b) Pecutan/Acceleration

$$= \frac{4 - 12}{20}$$

$$= -\frac{8}{20}$$

$$= -0.4 \text{ m/s}^2$$

(c) Pecutan/Acceleration

$$= \frac{6 - 2}{5}$$

$$= \frac{4}{5}$$

$$= 0.8 \text{ m/s}^2$$

20 (a) Pecutan/Acceleration

$$= \frac{15 - 12}{10}$$

$$= \frac{3}{10}$$

$$= 0.3 \text{ m/s}^2$$

(b) Pecutan/Acceleration = 0

$$27 - u = 0$$

$$u = 27$$

(c) Pecutan = -300 km/j^2
Acceleration = -300 km/h^2

$$\frac{v - 88}{60} = -300$$

$$v - 88 = -300 \times \frac{2}{60}$$

$$v - 88 = -10$$

$$v = 78$$

(d) Pecutan = 45 m/minit^2
Acceleration = 45 m/minute^2

$$\frac{120 - 105}{\frac{t}{60}} = 45$$

$$15 = 45 \times \frac{t}{60}$$

$$60 = 3t$$

$$t = 20$$

Praktis Sumatif

1 A 150 m/minit
150 m/minute

$$= \frac{150 \text{ m}}{60 \text{ s}}$$

$$= 2.5 \text{ m/s}$$

B 18 000 m/j
18 000 m/h

$$= \frac{18\,000 \text{ m}}{3\,600 \text{ s}}$$

$$= 5 \text{ m/s}$$

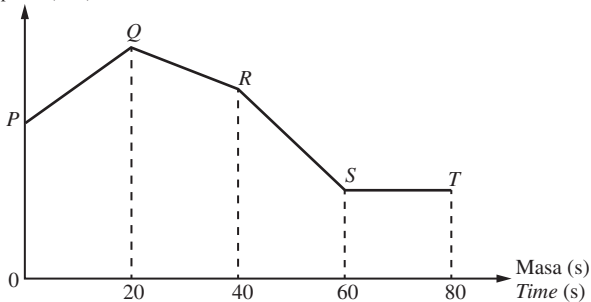
$$\begin{aligned}
 \text{C } & 7.2 \text{ km/j} \\
 & 7.2 \text{ km/h} \\
 & = \frac{7\,200 \text{ m}}{3\,600 \text{ s}} \\
 & = 2 \text{ m/s}
 \end{aligned}$$

$$\begin{aligned}
 \text{D } & \frac{9}{20} \text{ km/minute} \\
 & \frac{9}{20} \text{ km/minute} \\
 & = \frac{9\,000 \text{ m}}{20 \times 60 \text{ s}} \\
 & = 7.5 \text{ m/s}
 \end{aligned}$$

Jawapan/Answer: C

2

Laju (m/s)
Speed (m/s)



Garis lurus ST mewakili laju seragam.
Straight line ST represents uniform speed.

Jawapan/Answer: D

3 Dari M ke N/From M to N:

Masa yang diambil/Time taken

$$\begin{aligned}
 & = \frac{150}{50} \\
 & = 3 \text{ jam/hours}
 \end{aligned}$$

Dari N ke M/From N to M:

Masa yang diambil/Time taken

$$\begin{aligned}
 & = 3 - 0.5 \\
 & = 2.5 \text{ jam/hours}
 \end{aligned}$$

Laju purata/Average speed

$$\begin{aligned}
 & = \frac{150}{2.5} \\
 & = 60 \text{ km/j} \\
 & 60 \text{ km/h}
 \end{aligned}$$

Jawapan/Answer: A

$$4 \text{ } 45 \text{ minit} = \frac{45}{60} \text{ jam}$$

$$45 \text{ minutes} = \frac{45}{60} \text{ hour}$$

Jarak yang dilalui
Distance travelled

$$= 80 \times \frac{45}{60}$$

$$= 60 \text{ km}$$

Jawapan/Answer: B

$$\begin{aligned}
 \text{5 } & 108 \text{ km/j} \\
 & 108 \text{ km/h} \\
 & = \frac{108 \times 1\,000 \text{ m}}{3\,600 \text{ s}} \\
 & = 30 \text{ m/s}
 \end{aligned}$$

Pecutan/Acceleration

$$\begin{aligned}
 & = \frac{0 - 30}{20} \\
 & = -1\frac{1}{2} \text{ m/s}^2
 \end{aligned}$$

Jawapan/Answer: A

- 6 (a) 79 km/j, 85 km/j, 96 km/j, 112 km/j
79 km/h, 85 km/h, 96 km/h, 112 km/h
(b) Laju kereta berubah sepanjang perjalanan dari A ke E.

Maka, kereta itu tidak bergerak dengan laju seragam.

The speed of the car varies for the journey from A to E.

Therefore, the car is not travelling with uniform speed.

- (c) Jumlah jarak yang dilalui dari A ke E

Total distance travelled from A to E

$$= 85 \times \frac{15}{60} + 112 \times \frac{15}{60} + 79 \times \frac{15}{60} + 96 \times \frac{15}{60}$$

$$= (85 + 112 + 79 + 96) \times \frac{15}{60}$$

$$= 372 \times \frac{15}{60}$$

$$= 93 \text{ km}$$

Jumlah masa yang diambil untuk bergerak dari A ke E

Total time taken to travel from A to E

$$= 15 + 15 + 15 + 15$$

$$= 60 \text{ minit/minutes}$$

$$= 1 \text{ jam/hour}$$

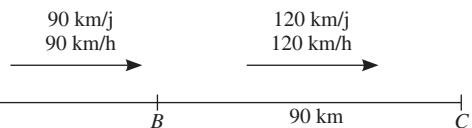
Laju purata/Average speed

$$= \frac{93}{1}$$

$$= 93 \text{ km/j}$$

$$93 \text{ km/h}$$

7



- (a) Jarak di antara A dan B
Distance between A and B

$$= 90 \times 2\frac{2}{3}$$

$$= 240 \text{ km}$$

- (b) Masa yang diambil untuk bergerak dari B ke C
Time taken to travel from B to C

$$= \frac{90}{120}$$

$$= \frac{3}{4} \text{ jam}$$

$$\frac{3}{4} \text{ hour}$$

Jumlah jarak yang dilalui dari A ke C

Total distance travelled from A to C

$$= 240 + 90$$

$$= 330 \text{ km}$$

Jumlah masa yang diambil untuk bergerak dari A ke C

Total time taken to travel from A to C

$$= 2\frac{2}{3} + \frac{35}{60} + \frac{3}{4}$$

$$= 4 \text{ jam}$$

4 hours

Laju purata kereta dari A ke C

Average speed of car from A to C

$$= \frac{330}{4}$$

$$= 82.5 \text{ km/j}$$

$$82.5 \text{ km/h}$$

$$8 \text{ (a) } \frac{u - 13}{8} = 1.5$$

$$u - 13 = 12$$

$$u = 25$$

$$\text{(b) } \frac{v - u}{18 - 8} = 0.9$$

$$\frac{v - 25}{10} = 0.9$$

$$v - 25 = 9$$

$$v = 34$$