UNIT 18 *Speed, Distance and Time* Revision Test 18.1 (Standard)

1. A car travels at a speed of 30 mph. How far does it travel in:

   (a) 5 hours,

   (b) 10 hours,

   (c) $\frac{1}{2}$ hour ?

   (6 marks)

2. Jane rides her bike at 5 mph. How long would it take her to cycle:

   (a) 20 miles,

   (b) 55 miles,

   (c) $2\frac{1}{2}$ miles ?

   (6 marks)

3. Ameer drives 80 miles in 2 hours. What is his average speed in mph?

   (2 marks)

4. Jenny walks 28 miles in 7 hours. What is her average speed in mph?

   (2 marks)

5. A cyclist rides 48 miles in 8 hours. What is the cyclist's average speed in mph?

   (2 marks)

6. How many minutes are there in:

   (a) 3 hours,

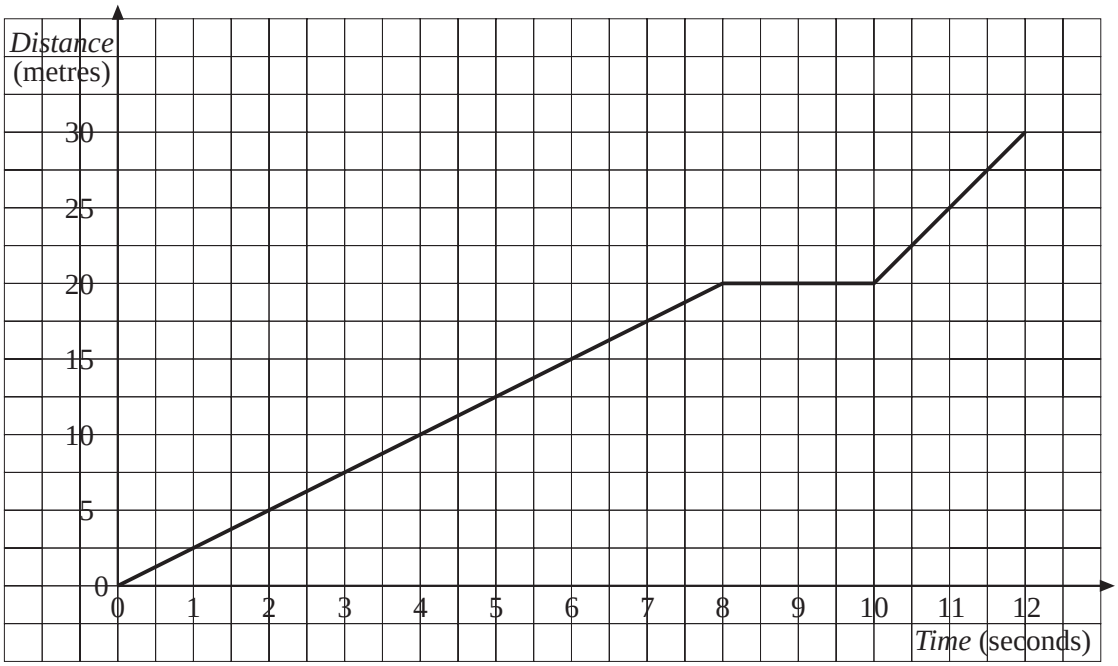
   (b) $1\frac{1}{2}$ hours,

   (c) $4\frac{1}{2}$ hours ?

   (5 marks)

Revision Test 18.1

7. Amy ran a short distance, as shown in the following distance-time graph:



(a) How far did Amy run before she stopped to rest?

(b) How far did she run altogether?

(c) For how long did she rest?

(d) Did she run faster *before* or *after* she stopped to rest?

(7 marks)

UNIT 18 *Speed, Distance and Time* Revision Test 18.2 (Academic)

1. A car travels at a speed of 47 mph. How far would it travel in:

   (a) 6 hours,

   (b) $2\frac{1}{2}$ hours ?

   (4 marks)

2. A cyclist rides his bike at 6 mph. How long would it take the cyclist to travel:

   (a) 24 miles,

   (b) 33 miles?

   (4 marks)

3. Marc drives 420 miles in 7 hours. What is his average speed in mph?

   (2 marks)

4. Alison drives 315 miles in 6 hours. What is her average speed in mph?

   (2 marks)

5. How many minutes are there in:

   (a) 6 hours,

   (b) $1\frac{1}{4}$ hours,

   (c) $4\frac{1}{3}$ hours ?

   (6 marks)

6. A car travels 90 miles. Calculate its average speed in mph if it travelled this distance in:

   (a) 3 hours,

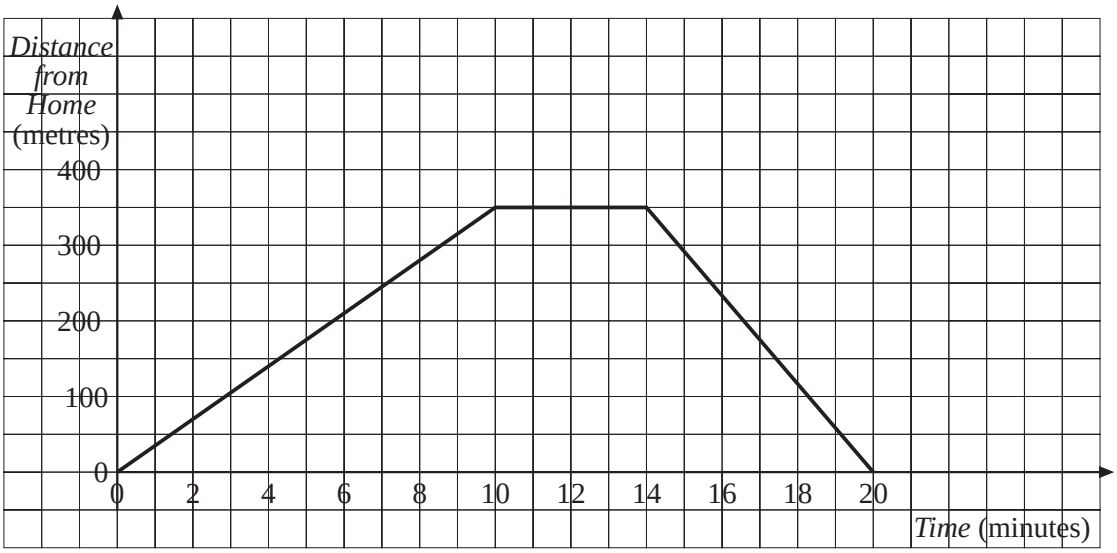
   (b) $2\frac{1}{2}$ hours,

   (c) 1 hour and 40 minutes.

   (5 marks)

Revision Test 18.2

7. The following distance-time graph shows how Annie moved as she walked to the shop to buy some chewing gum.



(a) How long did Annie spend at the shop?

(b) How far is the shop from Annie's house?

(c) Calculate the speed at which Annie walked to the shop, in metres per minute.

(5 marks)

8. Ben scored 18 goals in 20 matches. What is his average scoring rate in goals per match?

(2 marks)

UNIT 18 *Speed, Distance and Time* Revision Test 18.3 (Express)

1. A train travels at 125 mph. How far would it travel in:
   (a) 13 hours,
   (b) $2\frac{1}{4}$ hours ?

   (4 marks)

2. A cyclist rides his bike at 7.2 mph. How long would it take the cyclist to travel:
   (a) 36 miles,
   (b) 16.2 miles?

   (4 marks)

3. Ian drives 198 miles in $2\frac{1}{2}$ hours. Calculate his average speed in mph.

   (2 marks)

4. Andy drives 195 miles in 3 hours 15 minutes. Calculate his average speed in mph.

   (2 marks)

5. An object travels 247 miles. Calculate its average speed in mph if it takes:
   (a) 1 hour 5 minutes,
   (b) 3 hours 10 minutes,
   (c) 4 hours 20 minutes,
   (d) 1 hour 35 minutes.

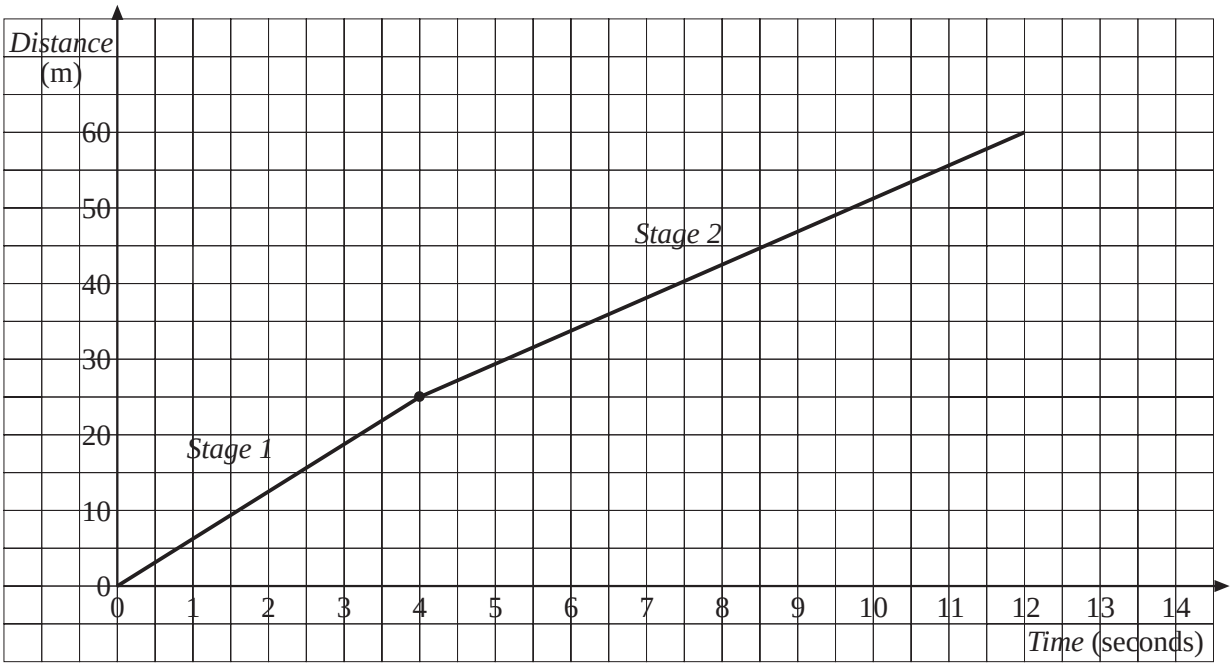
   (8 marks)

6. Javinda packs 380 boxes in an 8-hour shift at a factory.
   (a) Calculate the average number of boxes he packs per hour.
   (b) How long would it take him to pack 95 boxes?

   (4 marks)

Revision Test 18.3

7. The following distance-time graph shows the motion of a sprinter:



(a) Calculate the speed in, m/s, for each stage of the sprint.

(b) Calculate the average speed, in m/s, for the whole sprint.

(6 marks)

Revision Test 18.1 (Standard) Answers

1.	(a)	$30 \times 5 = 150$ miles	M1 A1	
	(b)	$30 \times 10 = 300$ miles	M1 A1	
	(c)	$30 \times \frac{1}{2} = 15$ miles	M1 A1	*(6 marks)*
2.	(a)	$20 \div 5 = 4$ hours	M1 A1	
	(b)	$55 \div 5 = 11$ hours	M1 A1	
	(c)	$2\frac{1}{2} \div 5 = \frac{1}{2}$ hour	M1 A1	*(6 marks)*
3.		$80 \div 2 = 40$ mph	M1 A1	*(2 marks)*
4.		$28 \div 7 = 4$ mph	M1 A1	*(2 marks)*
5.		$48 \div 8 = 6$ mph	M1 A1	*(2 marks)*
6.	(a)	$3 \times 60 = 180$ minutes	B1	
	(b)	$1\frac{1}{2} \times 60 = 90$ minutes	M1 A1	
	(c)	$4\frac{1}{2} \times 60 = 270$ minutes	M1 A1	*(5 marks)*
7.	(a)	20 m	B2	
	(b)	30 m	B2	
	(c)	2 seconds	B2	
	(d)	After	B1	*(7 marks)*

(TOTAL MARKS 30)

Revision Test 18.2 (Academic) Answers

1.	(a)	$47 \times 6 = 282$ miles	M1 A1	
	(b)	$47 \times 2\frac{1}{2} = 117\frac{1}{2}$ miles	M1 A1	*(4 marks)*
2.	(a)	$24 \div 6 = 4$ hours	M1 A1	
	(b)	$33 \div 6 = 5\frac{1}{2}$ hours	M1 A1	*(4 marks)*
3.		$420 \div 7 = 60$ mph	M1 A1	*(2 marks)*
4.		$315 \div 6 = 52\frac{1}{2}$ mph	M1 A1	*(2 marks)*
5.	(a)	$6 \times 60 = 360$	M1 A1	
	(b)	$1\frac{1}{4} \times 60 = 75$	M1 A1	
	(c)	$4\frac{1}{3} \times 60 = 260$	M1 A1	*(6 marks)*
6.	(a)	$90 \div 3 = 30$ mph	B1	
	(b)	$90 \div 2\frac{1}{2} = 36$ mph	M1 A1	
	(c)	$90 \div 1\frac{2}{3} = 54$ mph	M1 A1	*(5 marks)*
7.	(a)	4 minutes	B1	
	(b)	350 m	B2	
	(c)	$350 \div 10 = 35$ metres/minute	B2	*(5 marks)*
8.		$18 \div 20 = 0.9$ goals/match	M1 A1	(*2 marks)*

(TOTAL MARKS 30)

Revision Test 18.3 (Express) Answers

1. (a) $13 \times 125 = 1625$ miles M1 A1

   (b) $2\frac{1}{4} \times 125 = 281\frac{1}{4}$ miles M1 A1 *(4 marks)*

2. (a) $36 \div 7.2 = 5$ hours M1 A1

   (b) $16.2 \div 7.2 = 2\frac{1}{4}$ hours M1 A1 *(4 marks)*

3. $198 \div 2\frac{1}{2} = 79.2$ mph M1 A1 *(2 marks)*

4. $195 \div 3\frac{1}{4} = 60$ mph M1 A1 *(2 marks)*

5. (a) $247 \div 1\frac{1}{12} = 228$ mph M1 A1

   (b) $247 \div 3\frac{1}{6} = 78$ mph M1 A1

   (c) $247 \div 4\frac{1}{3} = 57$ mph M1 A1

   (d) $247 \div 1\frac{7}{12} = 156$ mph M1 A1 *(8 marks)*

6. (a) $380 \div 8 = 47.5$ boxes/hour M1 A1

   (b) $95 \div 47.5 = 2$ hours M1 A1 *(4 marks)*

7. (a) Stage 1 : $25 \div 4 = 6\frac{1}{4}$ m/s M1 A1

   Stage 2 : $35 \div 8 = 4\frac{3}{8}$ m/s M1 A1

   (b) $60 \div 12 = 5$ m/s M1 A1 *(6 marks)*

(TOTAL MARKS 30)