

## Working With Time

### Question 1 (Non-Calculator Level 2)

Lisa sees this advert in her local paper.

<p><b>Leaflet distributors needed</b></p> <p>£60 per 1000 leaflets</p>
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She agrees to deliver 2500 leaflets.

It will take her 10.5 hours to deliver the leaflets.

She decides to ask her friends Tilly and Kai to help her deliver the leaflets.

They each deliver an equal number of leaflets in an equal amount of time.

(a) How long will it take Lisa, Tilly and Kai to deliver the leaflets?  
Include units in your answer.

The money is shared equally between the 3 friends.

(b) How much does each of them get paid?

£

### Question 2 (Non-Calculator Level 2)

Shanika sees this advert in her local paper.

<p><b>Leaflet distributors needed</b></p> <p>£70 per 1000 leaflets</p>
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She agrees to deliver 4000 leaflets with her friend Atif.

It takes them both 8.25 hours to deliver the leaflets.

The next week they decide to ask their friend Samir to help them deliver the leaflets.

The 3 friends each deliver an equal number of leaflets in an equal amount of time.

(a) How long will it take Shanika, Atif and Samir to deliver the leaflets?

Include units in your answer

The money is shared equally between the 3 friends.

(b) How much does each of them get paid?

£

**Question 3 (Calculator Level 2)**

Jason works at the local outdoor swimming pool.  
He needs to empty the pool ready for repairs.

It took 7 hours and 36 minutes to empty the pool last year with three identical pumps.

This year Jason is going to use four identical pumps to empty the pool.

He will start emptying the pool at 9:30 am  
Jason thinks the pool will be empty by 3:15 pm.

Is Jason correct?

**Question 4 (Non-Calculator Level 2)**

Mobeena runs a business.

She has three projects to complete with her colleague.

Here is a table showing how long it will take two of them to complete each project.

<b>Project 1</b>	<b>Project 2</b>	<b>Project 3</b>
6.4 hours	17 hours	10.8 hours

Mobeena decides to hire a new employee to help them with the projects.

How long will it take them all three of them to complete all the projects?

## Mark Scheme

Question	Process	Mark	Mark Ref	Evidence
<b>Q1(a)</b>	Process to work with inverse proportion	1 or	<b>A</b>	$10.5 \div 3 (=3.5 \text{ hours})$ 10 hours 30 minutes $\div 3 (= 3 \text{ hours } 30 \text{ minutes})$ <b>OR</b> $630 \text{ minutes} \div 3 (=210 \text{ minutes})$
	Accurate figure including units	2	<b>B</b>	3.5 hours <b>OR</b> 3 hours 30 minutes <b>OR</b> 210 minutes
<b>Q1(b)</b>	Process to find total amount	1 or	<b>B</b>	$2500 \div 1000 (=2.5)$ <b>AND</b> $2.5 \times 60 (=150)$ <b>oe</b>
	Process to share money	2 or	<b>BC</b>	'150' $\div 3 (=50)$
	Accurate figure	3	<b>BCD</b>	£50
<b>Total marks for question</b>		<b>5</b>		

Question	Process	Mark	Mark Ref	Evidence
<b>Q2(a)</b>	Begins process to work with indirect proportion	1 or	<b>A</b>	$8.25 \times 2 (=16.5 \text{ hours})$ <b>OR</b> 8 hours 15 minutes $\times 2 (=16 \text{ hours } 30 \text{ minutes})$ <b>OR</b> $(8.25 \times 60) \times 2 (=990 \text{ minutes})$
	Full process to work with indirect proportion	2 or	<b>AB</b>	$16.5 \div 3 (=5.5 \text{ hours})$ 16 hours 30 minutes $\div 3 (= 5 \text{ hours } 30 \text{ minutes})$ <b>OR</b> $990 \text{ minutes} \div 3 (=330 \text{ minutes})$
	Accurate figure including units	3	<b>ABC</b>	5.5 hours <b>OR</b> 5 hours 30 minutes <b>OR</b> 330 minutes
<b>Q2(b)</b>	Process to find total amount	1 or	<b>B</b>	$4000 \div 1000 (=4)$ <b>AND</b> $4 \times 60 (=240)$ <b>oe</b>
	Process to share money	2 or	<b>BC</b>	'240' $\div 3 (=80)$
	Accurate figure	3	<b>BCD</b>	£80
<b>Total marks for question</b>		<b>6</b>		



Question	Process	Mark	Mark Ref	Evidence
<b>Q3</b>	Begins process to work with indirect proportion	1 or	<b>A</b>	7 hours 36 minutes x 3 (= 22 hours 48 minutes) <b>OR</b> 36 ÷ 60 = 0.6 <b>and</b> 7.6 hours x 3 (=22.8 hours) <b>OR</b> 420 + 36 (=456 minutes) <b>and</b> 456 x 3 (=1368 minutes)
	Full process to work with indirect proportion	2	<b>AB</b>	'22 hours 48 minutes' ÷ 4 (=5 hours 42 minutes) <b>OR</b> '22.8' ÷ 4 (=5.7 hours) <b>OR</b> 1368 ÷ 4 (=342 minutes)
	Process to find figures to compare	1 or	<b>C</b>	9:30 am + 5 hours 42 minutes (=3:12pm) <b>OR</b> 9:30 am – 3:15 pm (= 5 hours 45 minutes)
	Valid decision with accurate figure	2	<b>CD</b>	Yes <b>AND</b> 3:12pm <b>OR</b> Yes <b>AND</b> 3 minutes to spare <b>OR</b> Yes <b>AND</b> 5 hours 42 minutes (342 minutes) <b>AND</b> 5 hours 45 minutes (345 minutes)
<b>Total marks for question</b>		<b>4</b>		

Question	Process	Mark	Mark Ref	Evidence
<b>Q4</b>	Process to find total project time	1	<b>A</b>	6.4 + 17 + 10.8 (=34.2 hours)
	Begins process to work with indirect proportion	1 or	<b>B</b>	'34.2' x 2 (=68.4)
	Full process to work with indirect proportion	2 or	<b>BC</b>	'68.4' ÷ 3 (=22.8)
	Accurate figure	3	<b>BCD</b>	22.8 hours <b>oe</b>
<b>Total marks for question</b>		<b>4</b>		