

# You Are The Assessor | Level 2 maths

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# How many marks would you award?

Thalia has 6 machines to produce chocolate in her factory.  
Each machine produces the same amount of chocolate.

It takes  $3\frac{1}{2}$  hours for these 6 machines to produce enough chocolate to fill a crate with chocolate bars.

On Tuesday only 4 of the machines are working.

Work out the number of hours the 4 machines will take to produce the chocolate needed to fill a crate with chocolate bars.

(3)

$$3.5 \times 6 = 21$$

$$3.5 \times \frac{4}{3} = 14$$

~~$$21 \div 4 = 5.25 \text{ hrs}$$~~

$$14 \div 2 = 7 \text{ hrs}$$

7hrs

Question	Process	Mark	Mark Grid	Evidence
Q2	Begins process to work with inverse proportion	1 or	A	e.g. $3.5 \times 6 (=21)$ <b>OR</b> $6 \div 4 (=1.5)$ <b>OR</b> $4 \div 6 (=0.66..)$ <b>OR</b> $3.5 \div 4 (=0.875)$
	Full process to work with inverse proportion	2 or	AB	e.g. $'21' \div 4 (=5.25)$ <b>OR</b> $3.5 \times '1.5' (=5.25)$ <b>OR</b> $3.5 \div '0.66..' (=5.25)$ <b>OR</b> $'0.875' \times 6 (=5.25)$
	Accurate figure	3	ABC	e.g. 5.25 (hrs) <b>or</b> 5 hrs 15 mins
<b>Total marks for question</b>		<b>3</b>		

# How many marks would you award?

- This learner would get one mark for this answer.
- They have started to work with inverse proportion and seem to understand the basic concept but have been unable to find the right second calculation to find an accurate answer and get full marks.

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Work out the number of hours the 4 machines will take to produce the chocolate needed to fill a crate with chocolate bars. (3)

~~6 x 3.5 = 21~~      ~~35 min~~      ~~1 Hr = 60 min~~  
~~35 min for 6 machines~~      ~~3 1/2 = 210 min~~

210 ÷ 6  
 35 min for one machine  
 35 x 4 = 140 minute  
 140 =  $2\frac{1}{3}$

$2\frac{1}{3}$

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	Accurate figure	3	ABC	e.g. 5.25 (hrs) <b>or</b> 5 hrs 15 mins
<b>Total marks for question</b>		<b>3</b>		

# How many marks would you award?

- This learner would get zero marks for this answer.
- This learner does not understand what inverse proportion is and might benefit from some concept checking questions such as if it take 6 machines 3 ½ hours, would 1 machine take more or less time?

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Work out the number of hours the 4 machines will take to produce the chocolate needed to fill a crate with chocolate bars.

(3)

$$3.5 \div 6 = 0.58$$

$$\therefore 0.58 \times 4 = 2.32$$

$$0.58 \times 2 = 1.16$$

$$1.16 \div 4 = 0.29$$

$$0.29 + 0.88 = 0.87$$

$$0.87 \times 6 = 5.22$$

5.22

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	Accurate figure	3	ABC	e.g. 5.25 (hrs) <b>or</b> 5 hrs 15 mins
<b>Total marks for question</b>		<b>3</b>		

# How many marks would you award?

- This learner would get two marks for this answer.
- This learner has rounded their answer mid-way through their working, which means their final answer is not accurate. Learners should not round their answers mid-way through a process.