

Proportional reasoning

How to ...

Tame Valley is a company that makes yoghurt.

A machine fills trays of 20 pots with yoghurt.

In one hour the machine fills a total of 15 000 pots.

Work out how many seconds the machine takes to fill each tray of pots

we know

1 tray = 20 pots

15,000 pots = 1 hour.

So

$$15,000 \div 20 = 750 \text{ trays per hour}$$

60 mins per
hour

$$750 \div 60 = 12.5 \text{ trays per min}$$

60 seconds per
minute

$$60 \div 12.5 = 4.8 \text{ seconds}$$

(4)

Now have a go yourself ...

SORTED IT

1) A car travels at a steady speed of 50 miles per hour. How long does it take to travel:

- (a) 150 miles (b) 350 miles.

2) Four 1 litre tins of pain cost £36.60. Work out the cost of 7 1 litre tins of paint.

NAILED IT

1) Joe is paid £54 for 8 hours work. How much is he paid for 5 hours work.

2) Mel buys 17 cakes for £12.75 Work out the cost of 6 of these cakes.

MASTERED IT

1) A 2.5 m piece of ribbon costs £1.35 Work out the cost of 6 m of this ribbon.

2) A factory uses 3 machines to complete a job in 15 hours. If 2 extra machines are used, how long will the job take?

3) A document will fit onto exactly 32 pages if there are 500 words on a page.

If the number of words on a page are reduced to 400, how many more pages will there be in the document?

Exam Questions

Q1. Bob lays 200 bricks in one hour. He always works at the same speed.

Bob takes 15 minutes morning break and 30 minutes for lunch.

Bob has to lay 960 bricks. He starts work at 9 am. Work out the time he will finish laying bricks.

(3)

Q2. A machine fills 720 packets of crisps in 1 hour. How long will it take to fill 1680 packets of crisps. Give your answer in hours and minutes.

(3)

Ready to be marked ?

Checklist

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Answer checked

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Working out shown

Keywords



Things to remember ...



What went well ...



Teacher comment ..