



Week 2

Key Instant Recall Facts

Year 6 – Spring 1

I can convert between decimals, fractions and percentages.

$$\frac{1}{2} = 0.5$$

$$\frac{1}{4} = 0.25$$

$$\frac{3}{4} = 0.75$$

$$\frac{1}{10} = 0.1$$

$$\frac{1}{5} = 0.2$$

$$\frac{3}{5} = 0.6$$

$$\frac{9}{10} = 0.9$$

$$\frac{1}{100} = 0.01$$

$$\frac{7}{100} = 0.07$$

$$\frac{21}{100} = 0.21$$

$$\frac{75}{100} = 0.75$$

$$\frac{99}{100} = 0.99$$

Key Vocabulary

How many **tenths** is 0.8?

How many **hundredths** is 0.12?

Write 0.75 as a **fraction**?

Write $\frac{1}{4}$ as a **decimal**?

Tues

Write the equivalent fraction (in its simplest form) to the following:

75% =	30% =	15% =	90% =	50% =	35% =
0.6 =	0.95 =	0.1 =	0.25 =	0.625 =	0.2 =
25% =	0.9 =	0.5 =	5% =	0.4 =	85% =

RECALL

$$342 \div 3 =$$

$$504 \div 8 =$$

$$1344 \div 7 =$$

$$351 \div 13 =$$

$$1632 \div 17 =$$

$$4896 \div 36 =$$

RECALL

$$342 \div 3 = 114$$

$$504 \div 8 = 63$$

$$1344 \div 7 = 192$$

$$351 \div 13 = 27$$

$$1632 \div 17 = 96$$

$$4896 \div 36 = 136$$

L.O. - TO DIVIDE DECIMALS BY INTEGERS

- **Some will** even be able to create a hypothesis about dividing decimals
- **Some will** be able predict answers using their knowledge of division
- **Most will** be able to use long division to divide decimals
- **All will** be able to use a diagrams to divide decimals

GUIDED PRACTICE – MY TURN



1) Four small blocks balance a 0.8 kg box.

What is the mass of each small block?

2) How many blocks will balance an 8 kg crate?

help

Use a bar model or place value chart to help you.



What else can you calculate with the knowledge you have?

GUIDED PRACTICE – MY TURN



1) Four small blocks balance a 0.8 kg box.

What is the mass of each small block?

2) How many blocks will balance an 8 kg crate?

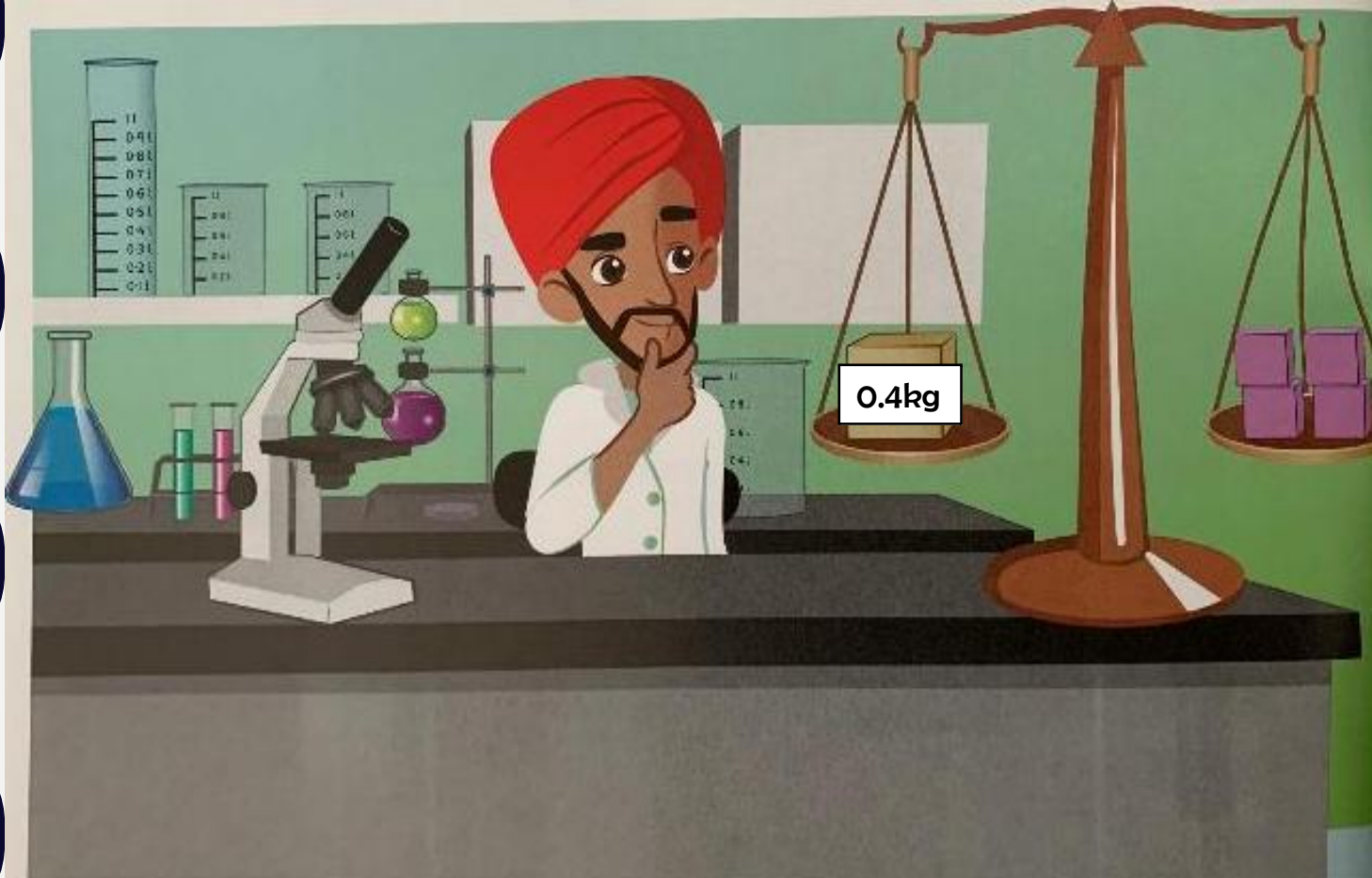
help

Use a bar model or place value chart to help you.



What else can you calculate with the knowledge you have?

GUIDED PRACTICE – YOUR TURN



1) Four small blocks balance a 0.4 kg box.

What is the mass of each small block?

2) How many blocks will balance an 8 kg crate?

help

Use a bar model or place value chart to help you.



What else can you calculate with the knowledge you have?

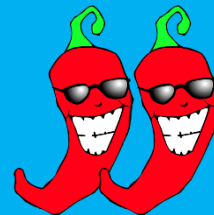


1) $42 \div 3 =$

2) $4.2 \div 3 =$

3) $0.42 \div 3 =$

What do you notice?

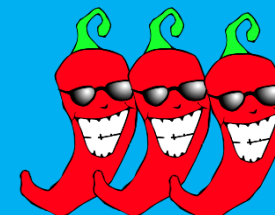


1) $9.64 \div 4 =$

2) $96.4 \div 4 =$

3) $0.964 \div 4 =$

What do you notice?



1) $19.44 \div 9 =$

2) $19.53 \div 9 =$

3) $19.62 \div 9 =$

What do you notice?



$145.255 \div 5 =$

Explain how you know it divides equally with no recurring.

1) $42 \div 3 = 14$

2) $4.2 \div 3 = 1.4$

3) $0.42 \div 3 = 0.14$

What do you notice?

1) $9.64 \div 4 = 2.41$

2) $96.4 \div 4 = 24.1$

3) $0.964 \div 4 = 0.241$

What do you notice?

1) $19.44 \div 9 = 2.16$

2) $19.53 \div 9 = 2.17$

3) $19.62 \div 9 = 2.18$

What do you notice?

$145.255 \div 5 = 29.051$

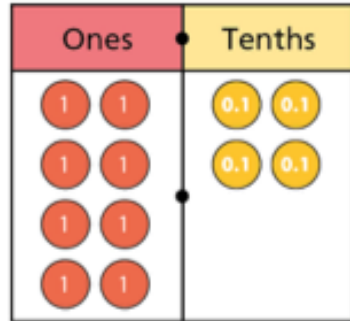


DIVE DEEPER 1

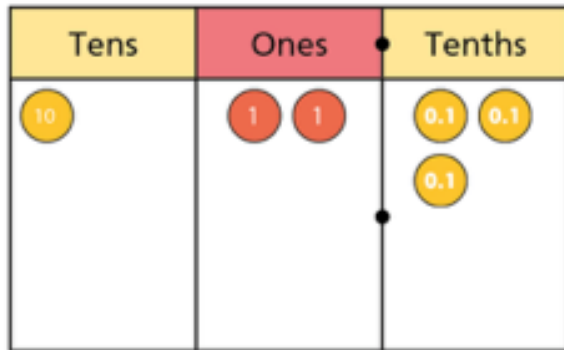
1)

Use place value counters to solve the calculations shown.

$$8.4 \div 4 =$$



$$12.3 \div 3 =$$



2)

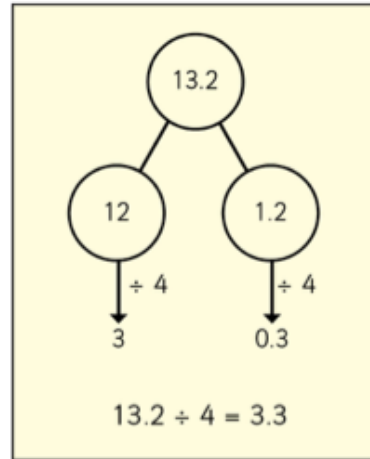
Fill in the missing numbers.

$$3.6 \div 4 = 36 \div \square$$

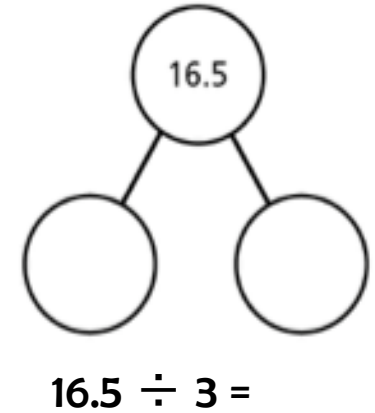
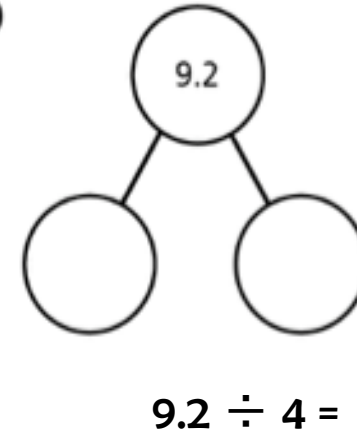
$$3.6 \div 4 = \square \div 8$$

Use Esther's method to complete the part-whole model and calculation.

a)



b)



3)

Predict whether the answers to these divisions will have one or two decimal places.

4)

a) $0.8 \div 5 =$

b) $85.8 \div 5 =$

c) $8.05 \div 5 =$

d) $508.5 \div 5 =$

Complete each calculation to check.



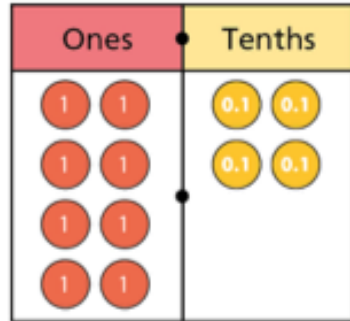
DIVE DEEPER 1



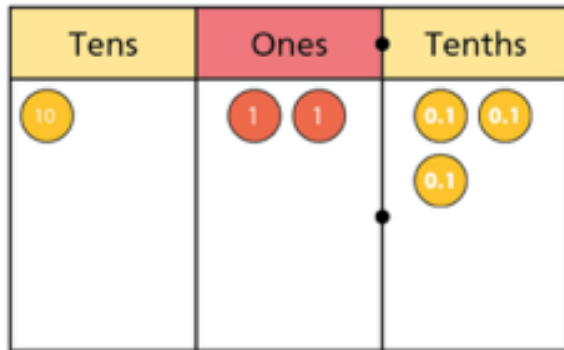
1)

Use place value counters to solve the calculations shown.

$$8.4 \div 4 = 2.1$$



$$12.3 \div 3 = 4.1$$



2)

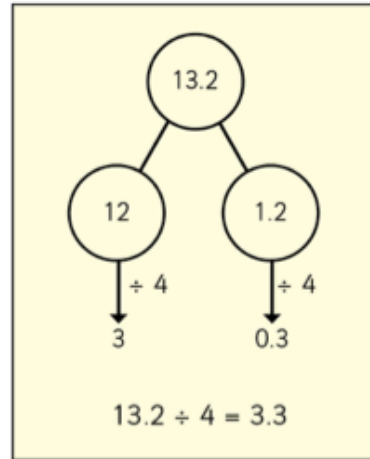
Fill in the missing numbers.

$$3.6 \div 4 = 36 \div 40$$

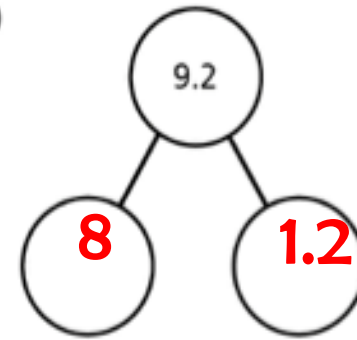
$$3.6 \div 4 = 7.2 \div 8$$

Use Esther's method to complete the part-whole model and calculation.

3)

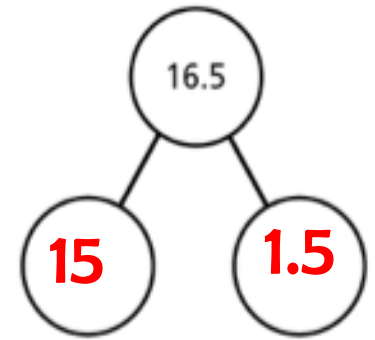


a)



$$9.2 \div 4 = 2.3$$

b)



$$16.5 \div 3 = 5.5$$

Predict whether the answers to these divisions will have one or two decimal places.

4)

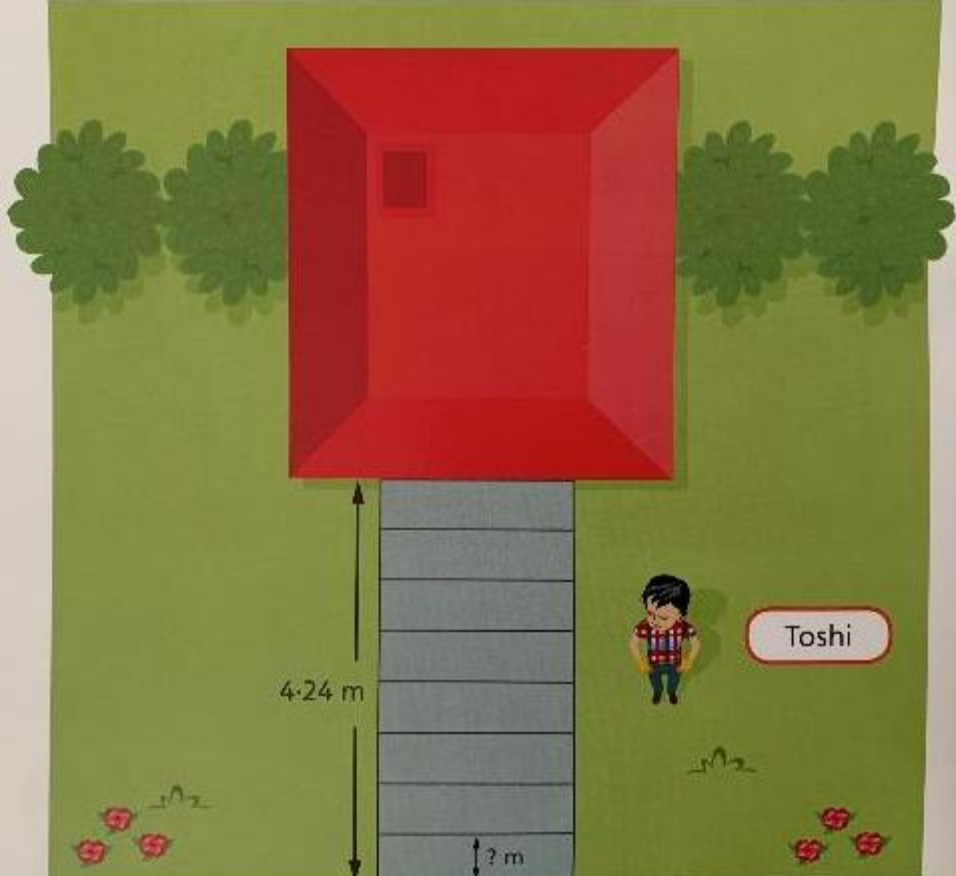
a) $0.8 \div 5 = 0.16$

b) $85.8 \div 5 = 17.16$

c) $8.05 \div 5 = 1.61$

d) $508.5 \div 5 = 101.7$

Complete each calculation to check.



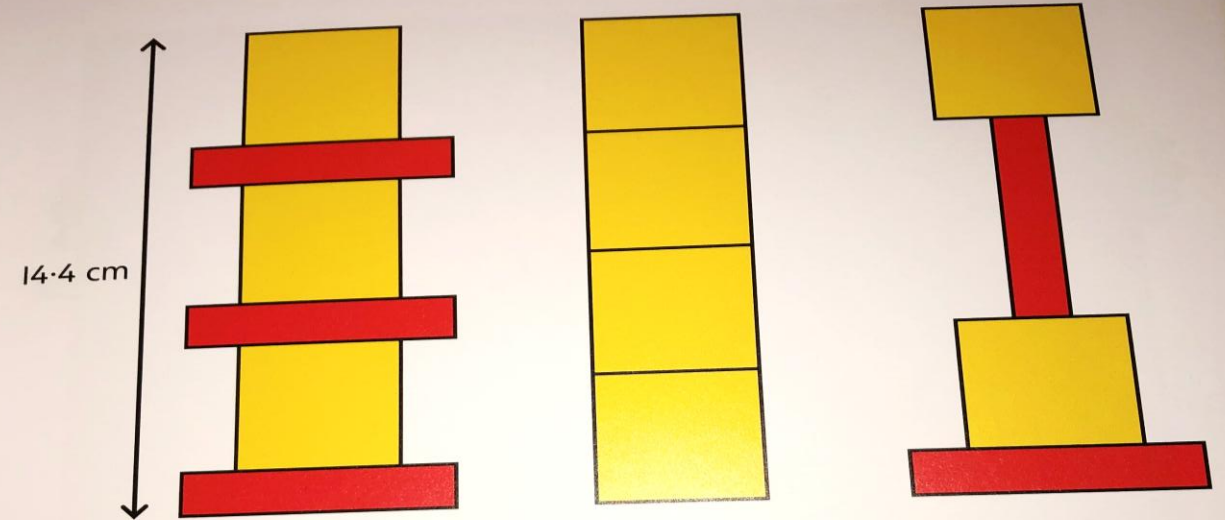
- 1) Calculate the height of one paving slab
- 2) How many slabs would Toshi need to make a path that is at least 10 m long
 - What patterns do you notice?
 - Can you write a rule?
 - Can you express your rule algebraically?



DIVE DEEPER 2



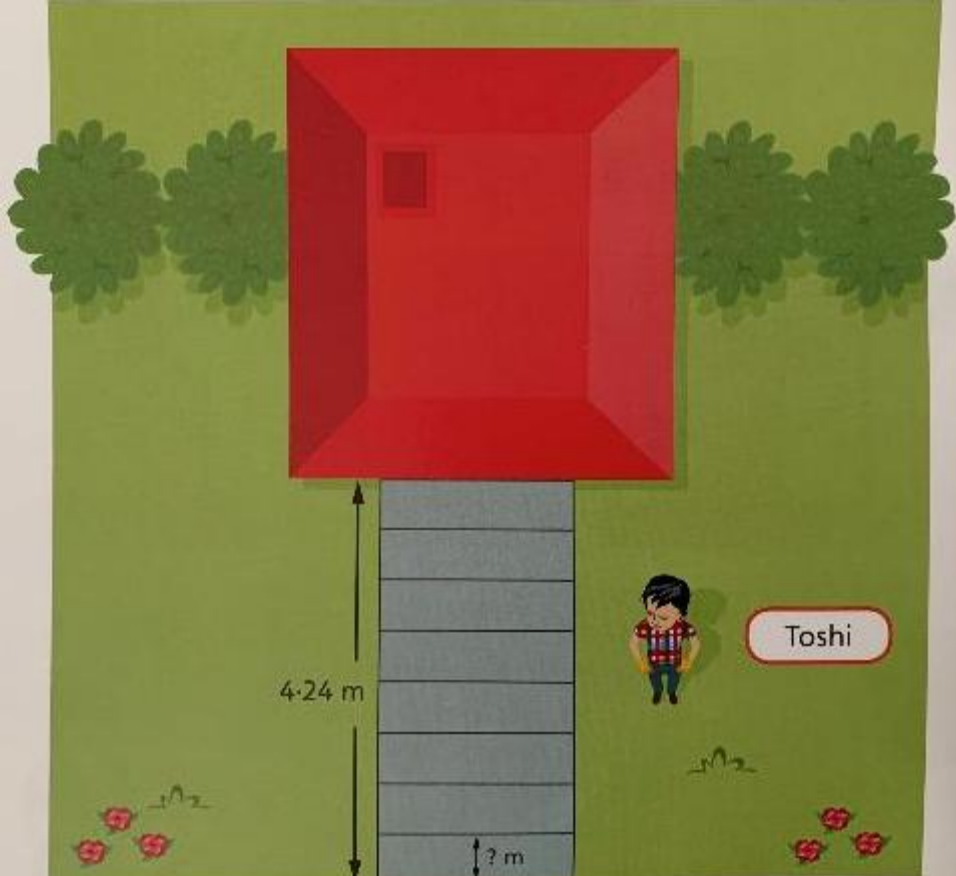
- 3 All three of these towers are 14.4 cm tall.
What is the height and width of one red block?



I can see an easy way to find the height of one yellow block.

A red block is wide and long.

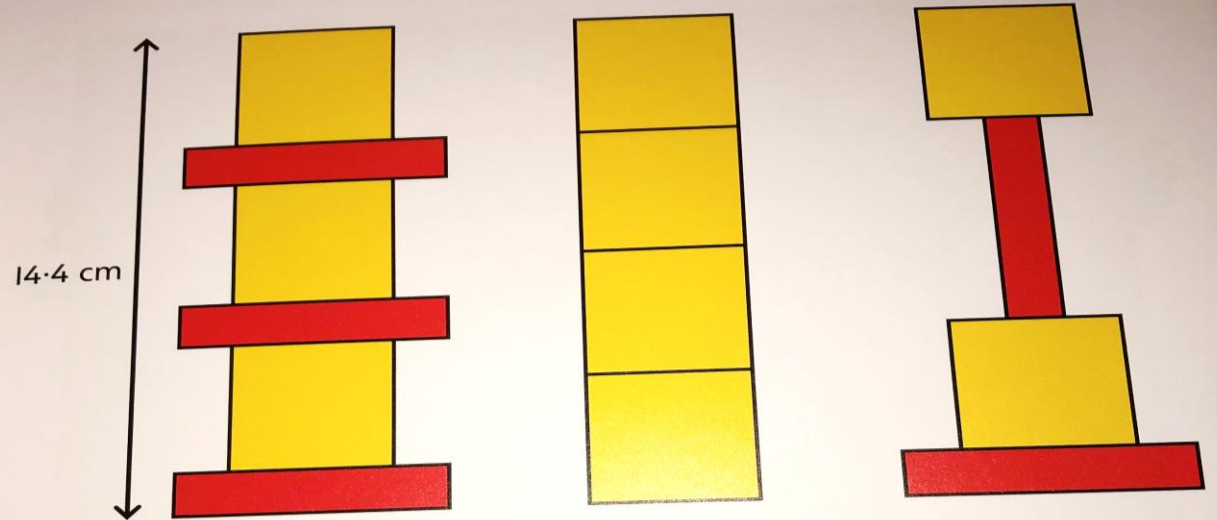




DIVE DEEPER 2



- 3 All three of these towers are 14.4 cm tall.
What is the height and width of one red block?



- 1) Calculate the width of one paving slab.

0.53 m

- 1) How many slabs would Toshi need to make a path that is at least 10 m long

19+ slabs

- What patterns do you notice?
- Can you write a rule?
- Can you express your rule algebraically?

I can see an easy way
to find the height of one
yellow block.

yellow = 3.6m

Red = 1.2m x 6m

A red block is wide and long.





Dive Deeper 3

Compare

Complete with the correct symbol: $< = >$

$1 \quad \boxed{<} \quad 0.55 \times 2$

$0.25 \quad \boxed{\phantom{<}} \quad 0.125 \times 2$

$1.05 \quad \boxed{\phantom{<}} \quad 0.55 \times 2$

$0.4 \quad \boxed{\phantom{<}} \quad 0.125 \times 3$

$0.4 \quad \boxed{\phantom{<}} \quad 0.05 \times 8$

$1 \quad \boxed{\phantom{<}} \quad 0.35 \times 3$

$1 \quad \boxed{\phantom{<}} \quad 0.15 \times 8$

$1.5 \quad \boxed{\phantom{<}} \quad 0.35 \times 3$

Small Difference Questions

$45 \div \boxed{} = 0.45$

$24 \div \boxed{} = 1$

$45 \div \boxed{} = 1$

$24 \div \boxed{} = 0.5$

$45 \div \boxed{} = 0.1$

$24 \div \boxed{} = 0.05$



Dive Deeper 3

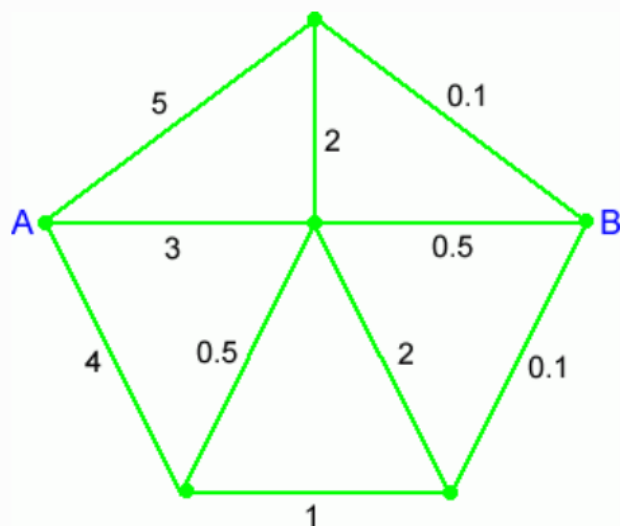
Decimals, page 16:

Compare: $1.05 < 0.55 \times 2$ $0.4 = 0.05 \times 8$ $1 < 0.15 \times 8$
 $0.25 = 0.125 \times 2$ $0.4 > 0.125 \times 3$ $1 < 0.35 \times 3$ $1.5 > 0.35 \times 3$

Decimals, page 17:

Small Difference Questions: Left column: 100 45 450
Right column: 24 48 480

There are lots of different routes from A to B in this diagram:



The idea is to work out the product of the numbers on these different routes from A to B . Let's say that in a route you are not allowed to visit a point more than once.

For example, we could have 3×0.5 but we couldn't have $3 \times 2 \times 5 \times 4 \times 1 \times 0.1$ because that route passes through A twice.

Which route or routes give the largest product?

Which route or routes give the smallest product?

Do you have any quick ways of working out the products each time?