

21 I KNOW WHAT YOUR NUMBER IS

9604 is a square number.

$$\triangle \blacksquare^2 = 9604.$$

$$\triangle \blacksquare^2 \text{ is a 2-digit number.}$$

$\blacksquare$ could be 8.

a What other number could $\blacksquare$ be?

b What could $\blacklozenge$ be for these square numbers?

i $\triangle \blacklozenge^2 = 2209$

ii $\triangle \blacklozenge^2 = 3025$

iii $\triangle \blacklozenge^2 = 1681$

iv $\triangle \blacklozenge^2 = 4356$

c Kahu was asked to find what number multiplied by itself gives the answer 4489. His calculator was broken.

He wrote

$30 \times 30 = 900$	$40 \times 40 = 1600$
$50 \times 50 = 2500$	$60 \times 60 = 3600$
$70 \times 70 = 4900$	

Kahu now knew the number must be either 63 or 67.

i Explain how he knew this.

ii Is the number 63 or 67?

d Use Kahu's method to find what number multiplied by itself gives these.

2209 3025 1681 4356 1024

Do not use a calculator

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