

GCSE –Numeracy and Mathematics

Tier: Higher

Grade:A/A*



Topic: Converting recurring decimals to fractions

Starter

Rearrange to make x the subject:

$$34 + 50x = 72$$

Top Tips!

- 1) Write x equal to the full number.
- 2) Multiply the number with the lowest power of 10 in order to create a number with the same tail.
- 3) Subtract the two equations from each other so that the tail disappears.
- 4) Rearrange in order to make x the subject.

Examination Question:

2015 November Unitised U2 Higher Q14(a)

Express $0.3\overline{81}$ as a fraction. [2]

2015 Summer Unitised U2 Higher Q12(a)

Express $0.7\overline{4}$ as a fraction. [2]

2015 Summer Linear P1 Higher Q17(a)

Express $0.3\overline{46}$ as a fraction. [2]

Assessment for Learning

Video / QR code

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Rearrange to make x the subject:

$$34 + 50x = 72$$

$$50x = 72 - 34$$

$$50x = 38$$

$$x = \frac{38}{50} \text{ or } \frac{19}{25}$$

Top Tips!

- 1) Write x equal to the full number.
- 2) Multiply the number with the lowest power of 10 in order to create a number with the same tail.
- 3) Subtract the two equations from each other so that the tail disappears.
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Examination Question:

2015 November Unitised U2 Higher Q14(a)

Express $0.3\overline{81}$ as a fraction. [2]

$$x = 0.3818181 \dots$$

$$10x = 3.818181 \dots \quad \{1\}$$

$$1000x = 381.818181 \dots \quad \{2\}$$

$$\{2\} - \{1\} \longrightarrow 990x = 378$$

$$x = \frac{378}{990} \text{ or } \frac{21}{55}$$

2015 Summer Unitised U2 Higher Q12(a)

Express $0.7\overline{4}$ as a fraction. [2]

$$x = 0.7444 \dots$$

$$10x = 7.444 \dots \quad \{1\}$$

$$100x = 74.444 \dots \quad \{2\}$$

$$\{2\} - \{1\} \longrightarrow 90x = 67$$

$$x = \frac{67}{90}$$

2015 Summer Linear P1 Higher Q17(a)

Express $0.3\overline{46}$ as a fraction. [2]

$$x = 0.3464646 \dots$$

$$10x = 3.464646 \dots \quad \{1\}$$

$$1000x = 346.464646 \dots \quad \{2\}$$

$$\{2\} - \{1\} \longrightarrow 990x = 343$$

$$x = \frac{343}{990}$$

Assessment for Learning

Video / QR code