Effective GCSE Revision

Study Smarter, Not Longer

- Forgetting is normal

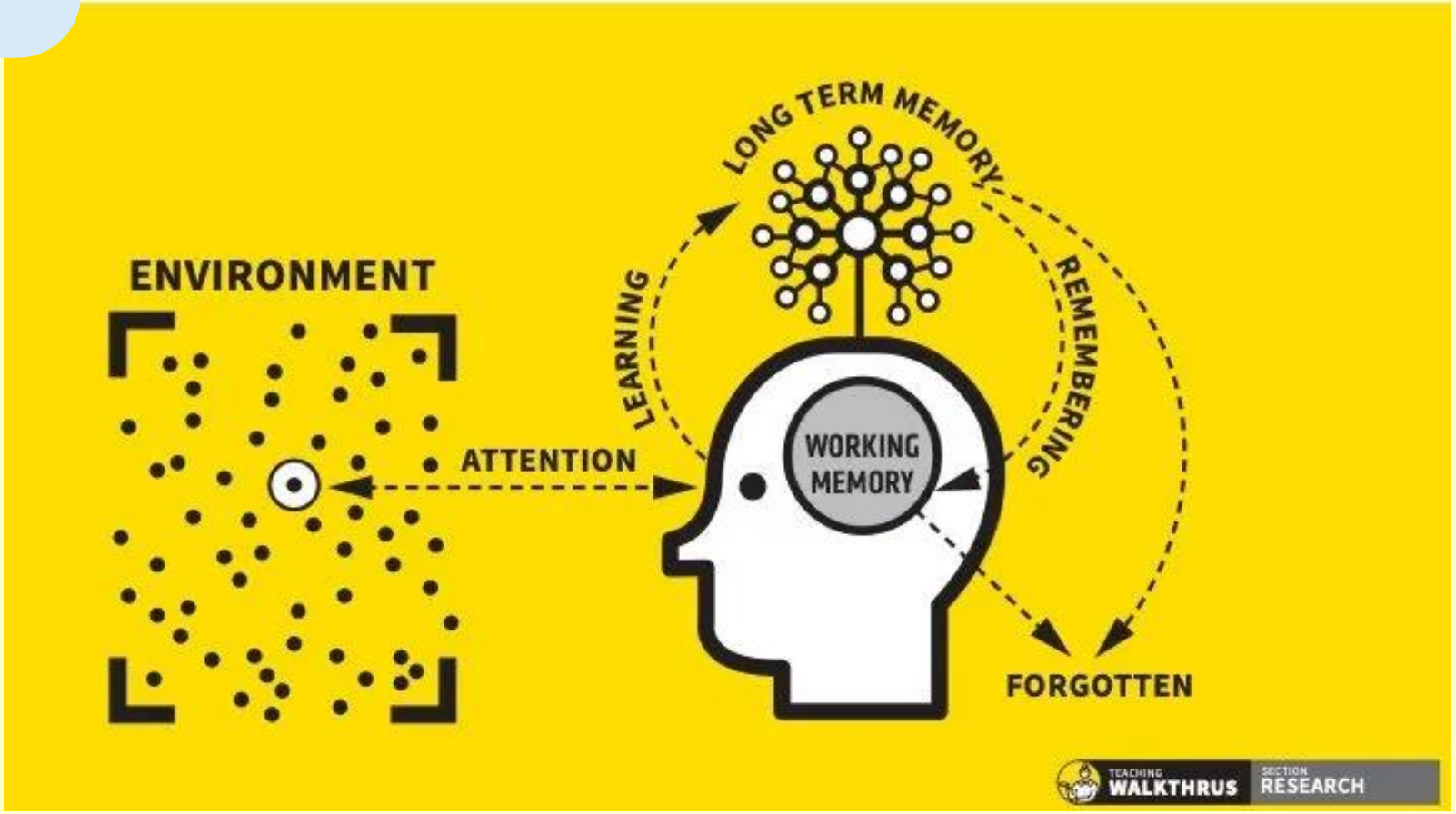
- Re-reading feels productive but creates an illusion of learning

  It might seem familiar, but it doesn’t mean you know it!

- Memory strengthens when you retrieve information

- Short, regular revision beats cramming

Your brain learns best when it has to retrieve information from memory.



What Makes Revision Effective?

- Revise little and often (20–30 minute sessions)

  Remember: completing Homework counts as revision!

- Use active recall instead of just re-reading

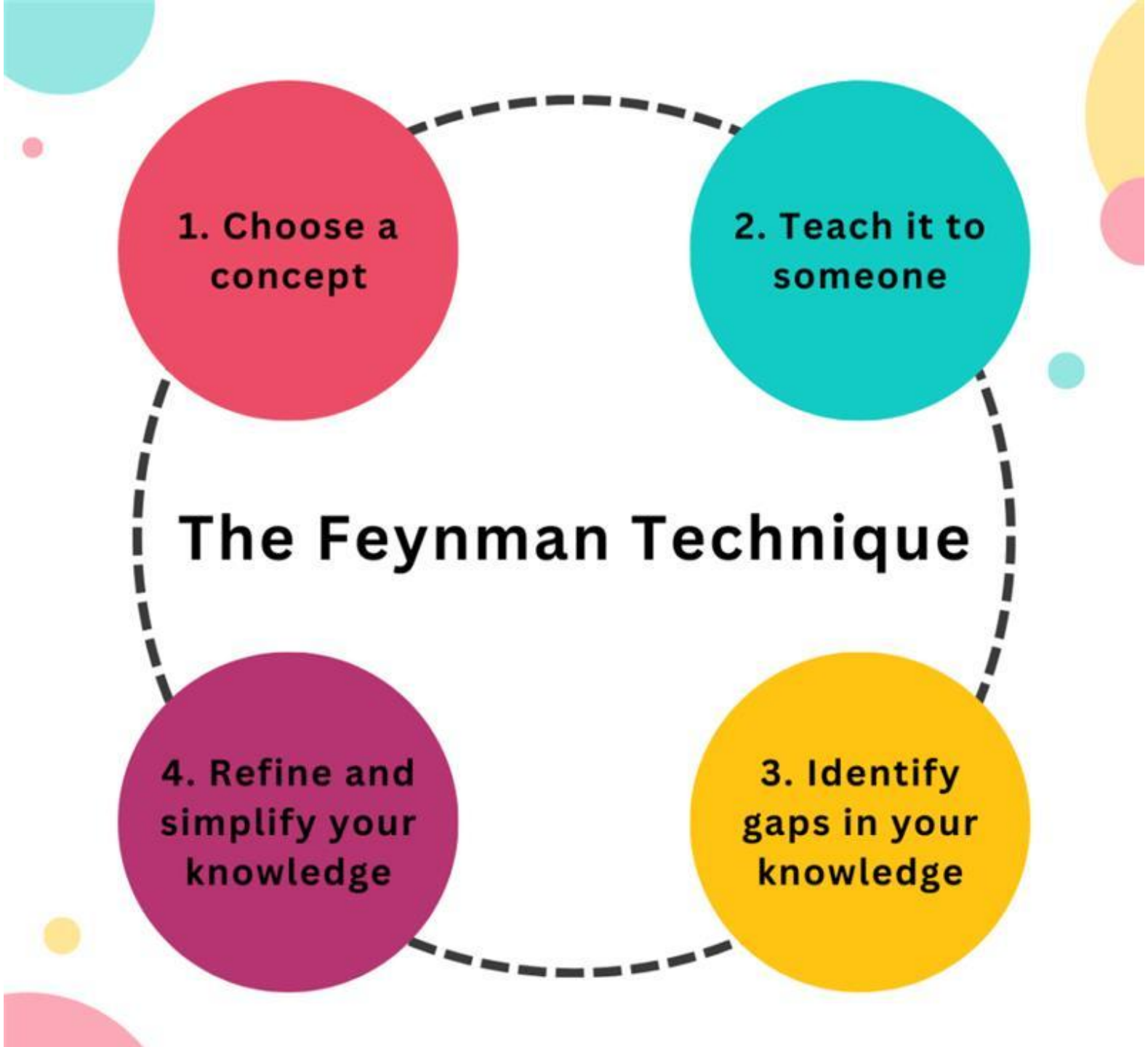
  Active recall = pulling information from memory without looking at notes.

- Mix subjects across the week
- Practise exam questions **<u>regularly</u>**
- **Review mistakes and knowledge gaps**

A good starting point is to begin revising the topics you find hardest/remember the least .

Now we are going to focus on two Revision Strategies you can use!

- **The Feynman Technique**
- **Flashcards**


1. Choose a concept
2. Teach it to someone
The Feynman Technique
4. Refine and simplify your knowledge
3. Identify gaps in your knowledge

1. Choose a concept

Pythagoras' Theorem

2. Teach it to someone

OR

YOURSELF

Pythagoras' Theorem

For any right-angled triangle you can find a missing length when you are given two of the lengths.

Formula: $a^2 + b^2 = c^2$

First label the triangle, then substitute into the formula.

Example



3. Identify gaps in your knowledge

Pythagoras' Theorem

Once upon a time there lived a clever chap called Pythagoras. He came up with a clever theorem...

Pythagoras' Theorem is Used on Right-Angled Triangles

Pythagoras' theorem only works for RIGHT-ANGLED TRIANGLES.
It uses two sides to find the third side.

The formula for Pythagoras' theorem is: $a^2 + b^2 = c^2$

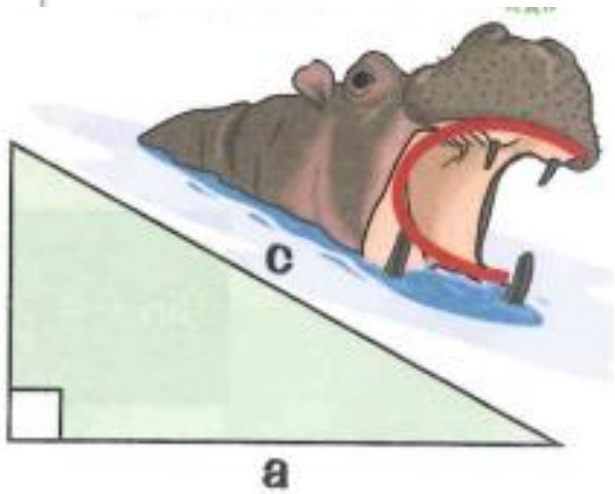
short sides; long side (hypotenuse)



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$144 + 25 = 169$

3) Square root: $c = \sqrt{169} = 13$ cm

R 12 cm Q

Always check the answer's sensible — 13 cm is longer than the other two sides, but not too much longer, so it seems OK.

2. Find the length of SU to 1 decimal place.

1) Square them: $b^2 = 3^2 = 9$, $c^2 = 6^2 = 36$

2) You want to find a shorter side, so SUBTRACT: $c^2 - b^2 = a^2$, $36 - 9 = 27$

3) Square root: $a = \sqrt{27} = 5.196...$ $= 5.2$ m (to 1 d.p.)

S 6 m T 3 m U

Check the answer is sensible — yes, it's a bit shorter than the longest side.

3. Identify gaps in your knowledge

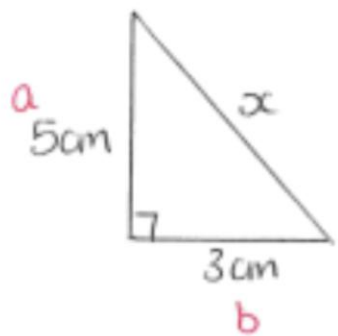
Pythagoras' Theorem

For any right-angled triangle you can find a missing length when you are given two of the lengths.

Formula: $a^2 + b^2 = c^2$ (short sides; long side (hypotenuse) located across from the right angle.)

First label the triangle, then substitute into the formula.

Example



$a^2 + b^2 = c^2$

$5^2 + 3^2 = x^2$

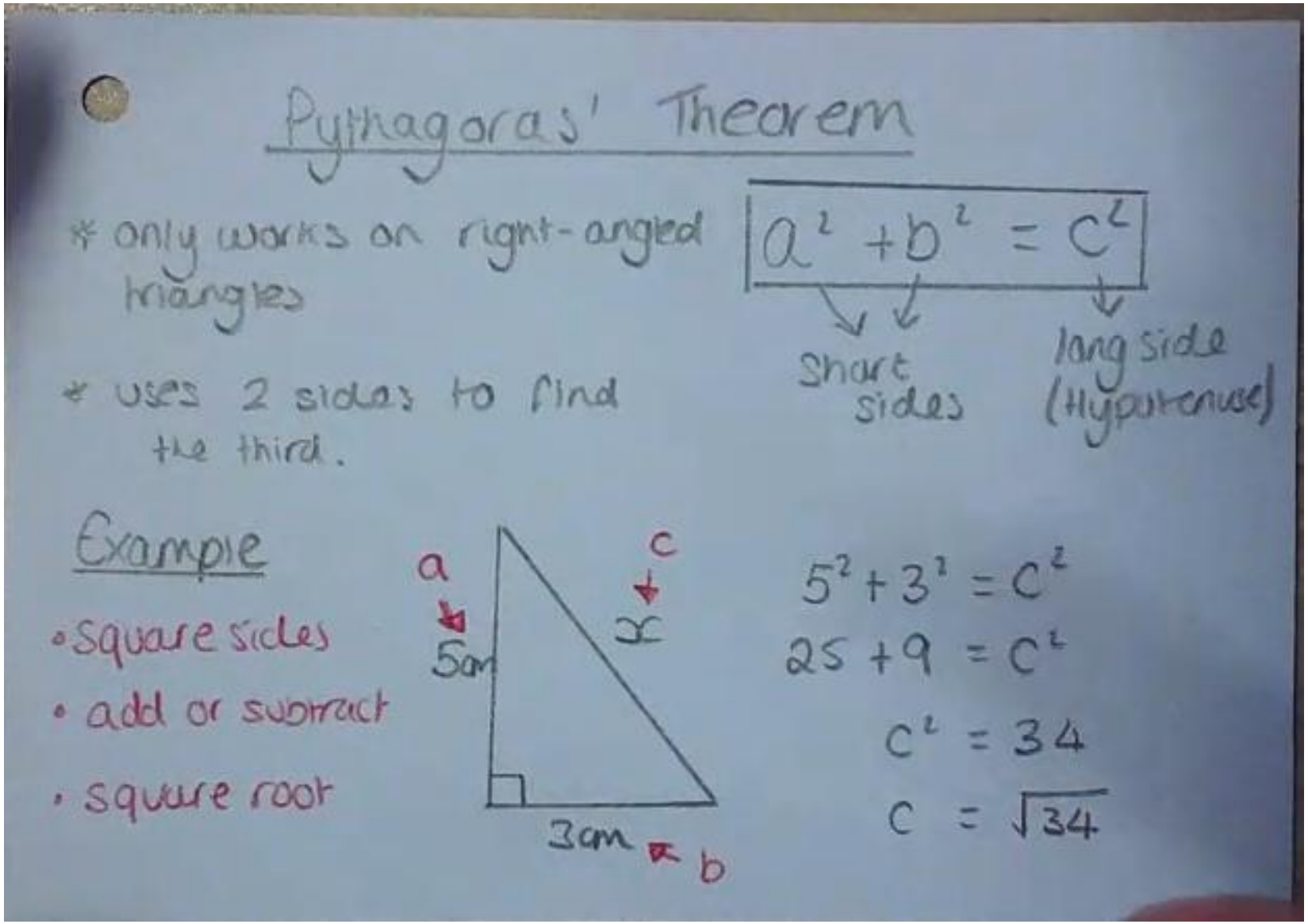
$25 + 9 = x^2$

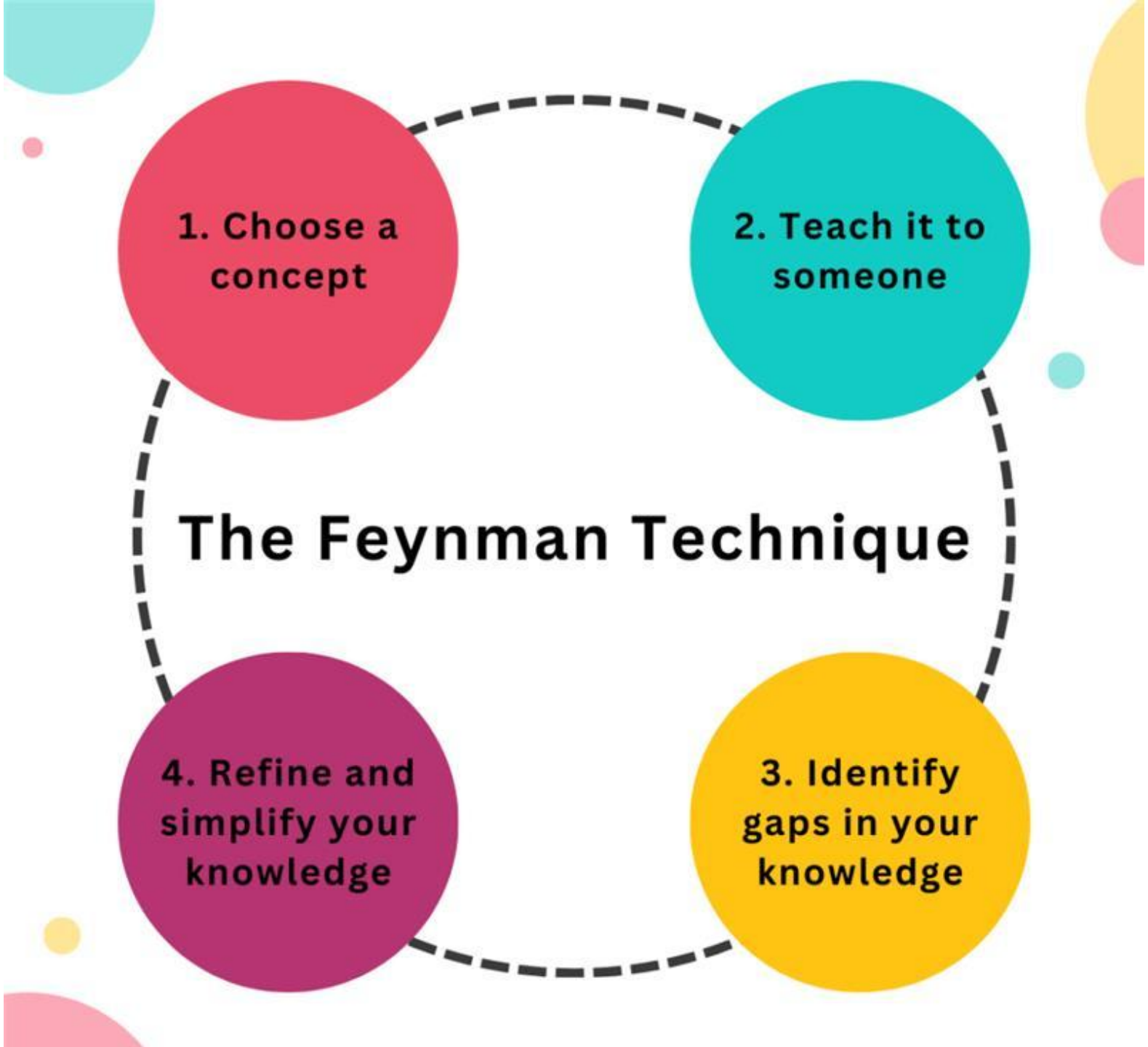
$x^2 = 34$ ← square root because that is the inverse of squaring.

$x = \sqrt{34}$

$x = 5.8\text{cm}$

4. Refine and simplify your knowledge





Another adaptation to the Feynman Technique:

Rather than writing it down, you could explain/teach someone else about the topic.

If you get stuck or run out of words to say, then you know where your gaps are.

This works really well if you are revising at home with parents/carers!

Flashcards

Using Flashcards Effectively

Do:

- Put a question on one side

  Use Keywords

- Put an answer on the back

  Keep answers short

- Test yourself before flipping

- Review regularly

- Separate cards into Know / Unsure / Don't Know

Avoid:

- Copying whole paragraphs
- Looking at answers too quickly
- Making cards you never review

LCM

Lowest Common Multiple

E.g.

Find the LCM of 4 and 6

4, 8, (12) 16, 20...

6, (12), 18, 24...

LCM = 12

Question.

What is the LCM of 8 and 12?

Answer

8, 16, (24), 32...

12, (24), 36...

LCM = 24

GCSE Maths

Key Cards GCSE Maths
Revision App

Click here to download

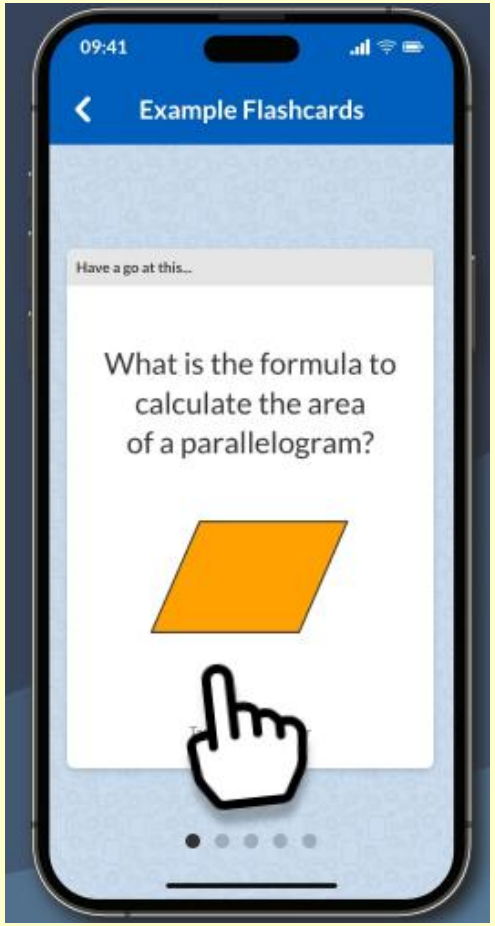
For AQA, Edexcel and OCR

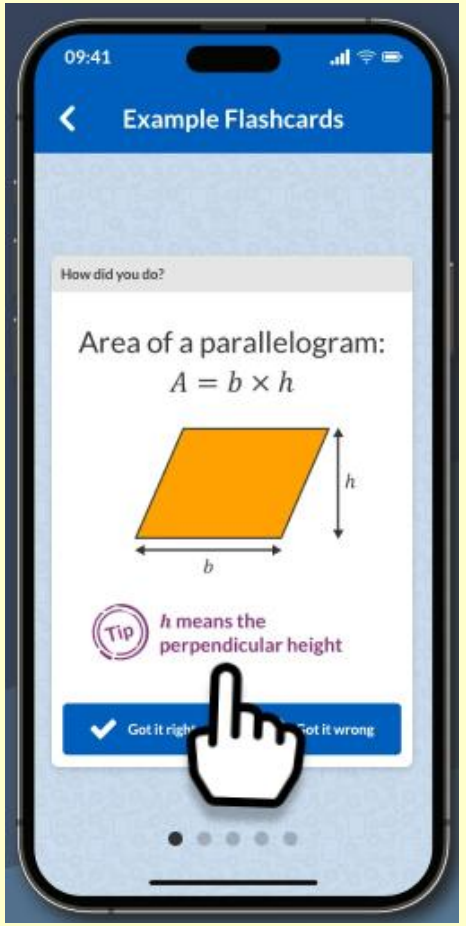
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Your Turn

Higher Only Topics

Apply the Feynman Technique to a topic below.

Create some effective Flashcards.

N1 Topics

Multiplying Decimals
Dividing Decimals
Rounding to Significant Figures
Estimation
Upper and Lower Bounds
Application of Bounds

N2 Topics

LCM
HCF
Product of Prime Factors
HCF/LCM from Product of Primes
Powers and roots
Laws of Indices
Negative Indices
Fractional Indices
Standard Form
Surds

Key Takeaways

✓ Revise regularly

✓ Use active recall

✓ Use flashcards correctly

✓ Explain topics using the Feynman Technique

✓ Practise exam questions

Consistency beats cramming!

Video reminder of the Feynman technique

