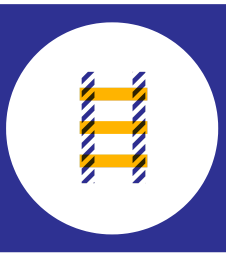
# WORKED EXAMPLES

## LEARN FROM A SOLVED PROBLEM



**When something is new, study a solved example first. Then try one on your own.**

### WHY IT WORKS

When a topic is new, trying to solve problems from scratch uses up all your brainpower just working out where to start. There is nothing left over for learning how it actually works.

Say you are learning to solve 3x + 5 = 20. Study a worked example first: take 5 from both sides to get 3x = 15, then divide both sides by 3 to get x = 5. Once you can see why each step happens, try 4x + 2 = 18 on your own.

In a classic study, students who studied worked examples solved new algebra problems faster, and made fewer mistakes, than students who only practised problems.

### HOW TO DO IT TONIGHT

1. Find a worked example in your textbook, class notes or an answer guide.
2. Read each step and ask, “Why did they do that?” Write the reason next to the step.
3. Cover the solution and try the same problem yourself.
4. Try a similar problem with different numbers, and check your answer.

### WHAT IT LOOKS LIKE IN EACH SUBJECT

**Maths**
Study a solved equation, then use the same steps with new numbers.

**Science**
Follow a worked physics calculation, then change one value and solve it again.

**English**
Label a model paragraph: point, evidence and explanation. Then write your own.

**History**
Pull apart a sample source answer, then answer a new source the same way.

**Business and Legal**
Work through a solved case study before you tackle a new one.

**Past papers**
Read the sample answer in the marking guide, then try the next question.

**TRY THIS**

Tonight, find **one worked example** in a subject you find hard. Write why each step happens, then cover it and solve a similar problem on your own.

**The research:** Sweller, J. and Cooper, G. A. (1985). The use of worked examples as a substitute for problem solving in learning algebra. *Cognition and Instruction*, volume 2, pages 59 to 89.