SIMPLE INTEREST

BUILDING BLOCKS

NAME _____ CLASS _____ DATE _____

KEY IDEA

Simple interest: the SAME amount is added every year.

£500 saved at 4% a year: 4% of £500 = £20

£500	£20	Year 1: £520
£500	£20 £20	Year 2: £540
£500	£20 £20 £20	Year 3: £560

1 Find 1% first. Then find the percentage.

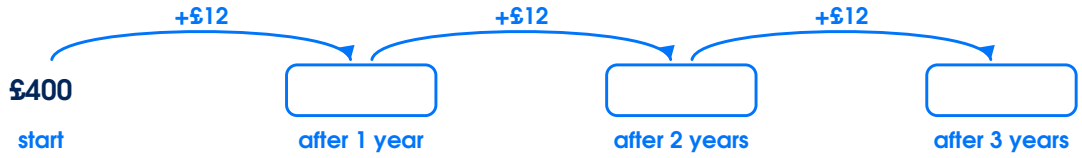
a) **3% of £400**

1. 1% = £ ____
2. 3% = £ ____

b) **4% of £250**

1. 1% = £ ____
2. 4% = £ ____

2 Kim saves £400. She earns £12 simple interest every year. Fill in her balance.



3 Ravi saves £600 at 3% simple interest a year. Complete the table.

YEAR	1	2	3
Interest			
Balance			

4 Ana saves £1000 at 4% simple interest a year for 5 years.

a) Interest each year = £ ____

b) Total interest after 5 years = £ ____

c) Balance after 5 years = £ ____

SIMPLE INTEREST

SUPPORT

NAME _____ CLASS _____ DATE _____

KEY IDEA

Simple interest is worked out on the principal (the amount first saved) every year.

£1500 at 4% for 3 years:

interest each year = 4% of £1500 = £60

total interest = £60 × 3 = £180

final balance = £1500 + £180 = £1680

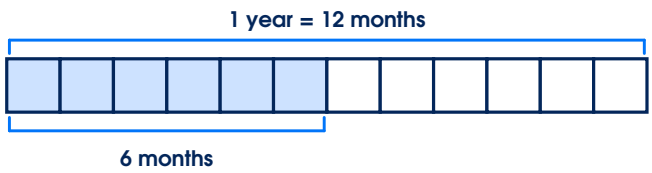
1 £800 is saved at 2.5% simple interest a year. Complete the table.

YEAR	1	2	3	4
Interest	£20			
Balance	£820			

2 Complete the table. Each account pays simple interest per year.

PRINCIPAL	RATE	YEARS	TOTAL INTEREST	FINAL BALANCE
£600	5%	3		
£2400	1.5%	4		
£350	6%	2		

3 £1200 is saved at 3% simple interest a year. How much interest is earned in 6 months?



a) 1 year: £ ____

b) 6 months: £ ____

4 £500 is saved for 2 years in an account that pays simple interest.

Account A: 2.4% per year. **Account B: 0.2% per month.**

Interest from A = £ ____ Interest from B = £ ____

Which earns more? A B THE SAME

SIMPLE INTEREST

CORE

NAME _____ CLASS _____ DATE _____

KEY IDEA

Simple interest = principal × rate × time (in years). The interest is the same every year because it is always worked out on the principal. Final balance = principal + interest.

FLUENCY

1 Complete the table. Each account pays simple interest per year.

PRINCIPAL	RATE	TIME	INTEREST	FINAL BALANCE
£4500	3.2%	5 years		
£720	1.75%	4 years		
£12 000	2.25%	18 months		

2 Work backwards.

a) £800 earns £96 simple interest in 3 years. Find the rate.

b) £2500 at 3% simple interest earns £300. How many years?

REASONING

3 £650 is invested at 3.2% simple interest for one year.

Liam says, "650 × 0.32 = 208, so the interest is £208."

a) Explain Liam's mistake.

b) Work out the correct interest.

4 Think about the final balance.

Nadia says, "Doubling the number of years doubles the final balance."

Is Nadia correct? Use £500 at 4% simple interest for 2 years and 4 years to explain.

SIMPLE INTEREST

GREATER DEPTH

NAME _____ CLASS _____ DATE _____

REASONING

1 Is each statement always, sometimes or never true? Circle your answer.

If it is sometimes true, give an example of when it is true and when it is not.

a) With simple interest, the interest is the same each year. ALWAYS SOMETIMES NEVER

b) Doubling the rate doubles the total interest. ALWAYS SOMETIMES NEVER

c) Simple interest over 2 years is more than the principal. ALWAYS SOMETIMES NEVER

d) With simple interest, the balance grows faster each year. ALWAYS SOMETIMES NEVER

PROBLEM SOLVING

2 After one year at 3.5% simple interest, the balance of an account is £2277. Find the principal.

Principal = £ ____

3 £3000 is invested at 2.8% simple interest per year. After how many whole years will the balance first be more than £3500?

Number of whole years = ____

★ CHALLENGE FOR ALL

4 Ade invests £x at 5% simple interest. Bea invests £1000 more than Ade, at 3% simple interest. After 4 years they have earned the same amount of interest. Find x.

x = ____

SIMPLE INTEREST

ANSWERS

BUILDING BLOCKS

1 a) 1% = £4, 3% = £12 b) 1% = £2.50, 4% = £10
2 £412 · £424 · £436
3 Interest: £18, £18, £18 · Balance: £618, £636, £654
4 a) £40 b) £200 c) £1200

SUPPORT

1 Interest: £20 every year · Balance: £840, £860, £880
2 £600: £90, £690 · £2400: £144, £2544 · £350: £42, £392
3 a) £36 b) £18
4 A: 2.4% of £500 = £12 a year, £24 · B: 0.2% of £500 = £1 a month, £24 · THE SAME

CORE

1 £4500: £720, £5220 · £720: £50.40, £770.40 · £12 000: £405, £12 405
2 a) £32 a year = 4% b) £75 a year: 4 years
3 a) 3.2% = 0.032, not 0.32 (that is 32%) b) £20.80
4 No. 2 years: £500 + £40 = £540. 4 years: £500 + £80 = £580, not £1080. The interest doubles, but the principal does not, so the balance does not double.

GREATER DEPTH

1 a) Always b) Always (same principal and time) c) Sometimes: true when the rate is over 50% a year, e.g. 60%; false at 5% d) Never (it grows by the same amount)
2 £2277 ÷ 1.035 = £2200
3 £84 a year; 5 years gives £3420, 6 years gives £3504: 6 years
4 $0.05x \times 4 = 0.03(x + 1000) \times 4$, so $0.2x = 0.12x + 120$, $0.08x = 120$: $x = 1500$