# Summer Term Maths Year 10

## Simple and Compound Interest

Day 2

Week 6

**1** £3000 is invested at 5% simple interest.

(a) How much interest will be earned in 2 years?

(b) How much interest will be earned in 4 years?

(c) How much will the investment be worth after 4 years?

**2** Ron invests £800 at 3% simple interest.

(a) How much will his investment be worth after 3 years?

(b) If Sam decides to invest £1600 instead of £800 at the same interest, will his investment have doubled in size? Explain your answer.

**3** Tommy invests £1500 at 2% simple interest for 4 years.

His sister Annie, invests £1200 at 2.5% simple interest for 3 years.

(a) Who will have made more interest on their investments?

(b) Whose investment will be the largest?

**4** Fill in the missing numbers.

(a) $5^{4} = 5 \times$ ☐

(b) $1.04 \times 1.04 \times 1.04 = 1.04^{\square}$

(c) ☐ $= 1.3^{3}$

White Rose Maths

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(d) $200 \times 1.03 \times 1.03 \times 1.03 = 200 \times \square^{\square}$

(e) $1500 \times 1.5^{4} = 1500 \times \square$

**5** Eva invests £4000 at 4% compound interest.
Compare these different ways of calculating the value of her investment after 3 years.

$£4000 \times 1.04^{3}$
$= £4499.46$

$£4000 \times 1.04 = £4160$
$£4160 \times 1.04 = £4326.40$
$£4326.40 \times 1.04 = £4499.46$

(a) Which way is the most efficient? Explain your answer.

(b) How much interest has she earned?

**6** Work out the value of each investment.

(a) £850 invested at 3% compound interest for 4 years.

(b) £850 invested at 6% compound interest for 4 years.

(c) £1700 invested at 6% compound interest for 2 years

(d) £2000 invested at 3.5% compound interest for 3 years.

**7** What is the difference between these two calculations?

(a) £5000 invested for 4 years at 5% simple interest.

(b) £5000 invested for 4 years at 5% compound interest.

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