

Spring Progress Check Revision Material

Year 7 Set 4 - 6

Theta

Test Date: Thursday 18 Jan

*(TEST IS MAINLY ON CHAPTER 6,
BUT WITH ELEMENTS OF CHAPTERS 1-5)*

How to revise for Maths?

- *Practise is key! Attached you will find some questions to help you do that.*
- *Once you've answered the questions – mark your work.*
- *If you get something wrong, look back on what you did and try work out where your mistake is. Unsure? Take your answers to your teacher or to Maths club on a Thursday and get help ahead of the test!*
- *Good luck!*

PROGRESS BAR Colour in the progress bar as you get questions correct.
Then fill in the progression chart on pages 111–113.

1 Work out

a 10% of 40 kg

b 30% of £70.

2 Which is larger, $\frac{1}{6}$ or $\frac{1}{12}$?

3 Complete these percentage and fraction conversions.

a 23% = $\frac{\dots\dots}{\dots\dots}$

b 9% = $\frac{\dots\dots}{\dots\dots}$

c $\frac{6}{100}$ =%

d $\frac{9}{10}$ =%

4 Complete these decimal and percentage conversions.

a 0.35 =%

b 0.01 =%

c = 80%

d = 6%

5 Convert the improper fraction $\frac{15}{4}$ to a mixed number.

6 Complete these equivalent fractions.

a $\frac{4}{5} = \frac{20}{\dots\dots}$

b $\frac{18}{40} = \frac{\dots\dots}{20}$

7 Work out

a $\frac{4}{9} + \frac{3}{9}$

b $\frac{9}{11} - \frac{3}{11}$

8 Write the fraction $\frac{18}{24}$ in its simplest form.

9 Work out $\frac{2}{9}$ of 63 miles.

10 Write whether each of these statements is true or false.

Give a reason for each of your answers.

a To find 70% of an amount, you multiply by 0.7

b To find 5% of an amount, you multiply by 0.5

PROGRESS BAR Colour in the progress bar as you get questions correct. Then fill in the progression chart on pages 111–113.

1 Draw a probability scale. Put these events onto the scale. Use their capital letters.

- A** You will get a 1 or a 2 when you roll an ordinary dice.
- B** You will choose the 7 of diamonds from a shuffled pack of 52 playing cards.
- C** You will get heads when you flip a coin.
- D** You will breathe out today.
- E** You will get a number less than 8 on a 10-sided dice.

2 Draw lines to match each number to a probability expressed in words.

75%	impossible
$\frac{1}{4}$	unlikely
0%	even chance
0.5	likely
1	certain

3 A fair 20-sided spinner numbered 1 to 20 is spun once.

Work out the percentage probability that it lands on

- a** the number 13 **b** not the number 13.

4 The probability of Alyson scoring from a penalty corner in hockey is 0.8

What is the probability of Alyson *not* scoring from a penalty corner?

5 Jamie has 160 songs on his mp3 play list. He has eight songs by 'The Chili Monkeys'.

Jamie presses the 'random' button on his mp3 player.

Work out the probability that the first song played is sung by 'The Chili Monkeys'.

6 Real In an experiment Maya pretended to be blind and tried to get people nearby to help her to cross a road. The table shows what happened.

Action taken	Frequency	Experimental probability
helped to cross	47	
looked, but walked on	12	
did not look, walked on	21	
Total frequency		

- a** Complete the table.
b Maya tries again to get help to cross the road. Estimate the probability that someone will help.

5 Extend

1 a i $\frac{3}{4}$

ii 75%

iii 0.75

b i $\frac{13}{25}$

ii 52%

iii 0.52

2 2 more squares; e.g. $\frac{3}{5}$ of 25 = 15, 15 - 13 = 2

3 a $1\frac{1}{4}$

b $1\frac{3}{4}$

c $1\frac{3}{4}$

4 a i $\frac{4}{25}$

ii 16%

b 84%; e.g. 100% - 16% = 84%

5 a $\frac{96}{4000} = \frac{3}{125}$

b Yes; e.g. $\frac{96}{4000} = 2.4\%$, which is more than 2%.

6 a 20% of children have a packed lunch.

b 17.5% of bikes have no lights.

c 1.24% of skateboards are white.

7 a i $\frac{8}{24}$

ii $\frac{10}{24}$

iii $\frac{9}{24}$

b $\frac{1}{3}, \frac{3}{8}, \frac{5}{12}, 0$

8 $\frac{7}{16}, \frac{5}{8}, \frac{3}{4}$

9 14

10a $\frac{85}{8} = 10\frac{5}{8}$ g

b $\frac{21}{4} = 5\frac{1}{4}$ cm

11 1600 cm²

5 Unit test

1 a 4 kg

b £21

2 $\frac{1}{6}$

3 a $\frac{23}{100}$

b $\frac{9}{100}$

c 6%

d 90%

4 a 35%

b 1%

c 0.8

d 0.06

5 $3\frac{3}{4}$

6 a $\frac{20}{25}$

b $\frac{9}{20}$

7 a $\frac{7}{9}$

b $\frac{6}{11}$

8 $\frac{3}{4}$

9 14 miles

10a True, e.g. $70\% = \frac{70}{100} = 0.7$

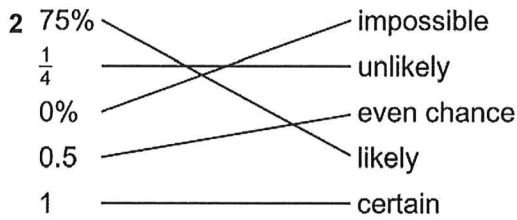
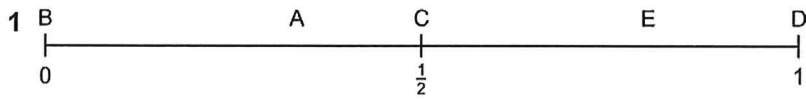
b False, e.g. $5\% = \frac{5}{100} = 0.05$

8 a

Student 1	Student 2
Paper A	Paper A
Paper A	Paper B
Paper B	Paper A
Paper B	Paper B

b $\frac{1}{4}$

6 Unit test



3 a 5%

b 95%

4 0.2

5 $\frac{8}{160} = \frac{1}{20}$

6 a

Action taken	Frequency	Experimental probability
helped to cross	47	$\frac{47}{80}$
looked, but walked on	12	$\frac{12}{80}$
did not look, walked on	21	$\frac{21}{80}$
Total frequency	80	

b $\frac{47}{80}$