Trinity High School

Mathematics Department

S1 Block 2 Revision

Торіс	I can	Got it!	Almost	Not yet
Fractions	Identify and show fractions equivalent to a			
	given fraction			
	Write any fraction in its simplest form			
	Write improper fractions and mixed			
	numbers			
	Add and subtract fractions with different			
	denominators including mixed numbers			
	Celeulate a fraction of a quantity			
Decimals	Calculate a fraction of a qualitity.			
Decimais				
	places.			
	ose rounding to estimate the answers to			
	Calculations.			
	Solve addition and subtraction problems			
	desimal places			
	Colve multiplication and division problems			
	solve multiplication and division problems			
	desimal places			
Longth	decimal places.			
Length	porimeter of a change			
Borimotor	perimeter of a shape.			
renneter	Choose appropriate units for length when			
	solving practical problems			
	Convert between standard units to three			
	decimal places and apply this when solving			
	calculations.			
	Choose the appropriate formula to calculate			
	area when required.			
Statistics	Source information or collect data making use			
	of digital technology.			
	Describe trends in data using appropriate			
	language.			
	Organise and display data appropriately in a			
	variety of forms			
	e.g bar graph, line graph, pie chart			
	Interpret raw and graphical data.			
	Calculate the mean, median, mode and range			
	for a set of data.			
	Select the most appropriate statistical diagram			
	to display a given data set.			

Fractions

1. Write down the fraction of each shape that is shaded then match the equivalent fractions:

		B	¢			F	G
2.	Write down 3 n	nore fra	ictions equiva	lent to:			
a)	$\frac{2}{3}$	b)	$\frac{1}{4}$	c)	<u>3</u> 5	d)	$\frac{4}{9}$
3.	Write these fra	ctions i	n simplest for	m:			
a)	25 35	b)	<u>12</u> 36	c)	<u>48</u> 56	d)	72 96
4.	Write these im	proper	fractions as m	ixed num	pers in their s	simplest f	orm:
a)	$\frac{25}{4}$	b)	$\frac{28}{10}$	c)	<u>54</u> 7	d)	65 20
5.	Write these im	proper	fractions as m	ixed num	pers in their s	simplest f	orm:
a)	$1\frac{3}{5}$	b)	$4\frac{8}{9}$	C)	$3\frac{7}{10}$	d)	$2\frac{3}{4}$
6.	Work out the	followir	ıg:				
a)	$\frac{2}{5} + \frac{1}{5}$	b)	$\frac{4}{5} + \frac{2}{3}$	C)	$1\frac{1}{4} + 2\frac{3}{8}$	d)	$2\frac{4}{5} + 3\frac{1}{2}$
e)	$\frac{6}{7} - \frac{4}{7}$	f)	$\frac{3}{5} - \frac{1}{10}$	g)	$5\frac{3}{4} - 2\frac{1}{3}$	h)	$4\frac{1}{6}-1\frac{1}{2}$
7.	Work out the	followir	ng:				
a)	$\frac{1}{5}$ of £450	b)	² / ₉ of 171kg	c) $\frac{5}{7}$	of \$504	d)	⁷ / ₈ of £16800
8.	Jane has co	omplete	d this questio	n in a clas	s test. Can y	/ou spot a	any mistakes?

Find
$$\frac{5}{6}$$
 of £93.
 $15r3 \xrightarrow{15r3} \times 5$
 $\frac{76\cdot5}{21}$ so £ 76.50

Decimals

1. (a)	Round the follo 4.3489	wing numbers to one de (b) 126.789	ecimal place: (c) 87.999	(d) 199.999	99
2. (a)	Round the follo 138.24356	owing numbers to three (b) 98.37892	decimal places: (c) 47.87999	(d) 5672.3	3939
3. (a)	Estimate an ans 4891 + 3456	swer to the following by (b) 9239 – 467	rounding each nu (c) 12134 ÷	umber to 1 figu 228 (d) 83	ire accuracy: 5 x 579
4. (a)	Calculate: 567.31 + 28.76	3 (b) 756. 587 – 4	198.237 (c)	145.673 x 4	(d) 264.82 ÷ 2

- 5. Five swimmers are entered into a competition. Four of the swimmers have had their turns. Their scores are 9.8 s, 9.75 s, 9.79 s, and 9.81 s. What score must the last swimmer get in order to win the competition?
- 6. Ellen wanted to buy the following items: A DVD player for \$49.95, a DVD holder for \$19.95 and a personal stereo for \$21.95. Does Ellen have enough money to buy all three items if she has \$90 with her?
- 7. What is the combined thickness of these five pieces of material: 0.008, 0.125, 0.15, 0.185, and 0.005 cm?
- 8. If a 5m piece of electrical tape has 0.037m cut from it, then what is the new length of the tape?
- 9. The cost for one person to register for Slimming World is £19.95, how much will it cost a family of 3 people to register?
- 10. The price of a food bill for 5 people is £127.60. How much should each person pay?

Length and Perimeter

answer in metres.

1.	Convert the following into centimetres:									
	(a) 9m	(b) 70mm	(c) 620mm	(d) 22m	(e) 5.3m	(f) 8.5m				

- 2. Convert the following into kilometres:
 (a) 6000m (b) 70m (c) 3400000m (d) 90530m (e) 125m (f) 5500m
- 3. Jack is 1.36metres tall. His friend Ian is 5cm taller than Jack. What height is Ian? Give your
- 4. Mary runs 600m every day. Work out how far Mary runs in one week. Give your answer in kilometres.
- 5. There are different lengths of rope lying around, 0.62m, 40cm, 700mm and 4m. What is the total length of rope altogether?
- 6. Find the perimeter of the following shapes:



- 8. A rectangle has a length that is twice its width. If the length is 18m, what is its perimeter?
- 9. Find an expression for the perimeter of the following shapes:



10. Calculate the perimeter and area of the following shapes:



Statistics

1. A group of pupils from Trinity High School were asked where they live.

Look at the graph to answer the questions:

- a) How many girls:
 - i) live in Renfrew?
 - ii) live in Erskine?
 - iii) Took part in the surevey?
- b) How many more boys live in Renfrew than in Erskine?
- c) How many pupils took part in the survey?





- 2). Some pupils were asked how many brothers and sisters (siblings) they had.
 - a). Which was the most popular number of siblings ?
 - b). Which was the least popular number of siblings ?
 - c). How many pupils have 0 siblings ?
 - d). How many pupils have 4 siblings ?
 - e). How many more pupils have 1 sibling than 3 siblings ?
 - f). How many more pupils have 2 sibling than 5 siblings ?
 - g). How many pupils were asked in total ?
- 3. Here is a pie chart showing eye colour in S1.
- a) What fraction and percentage of pupils have:
- i) green ii) hazel
- iii) brown iv) grey eyes?
- b) 130 pupils took part in the survey. How many had:
- i) green ii) hazel
- iii) brown iv) grey or blue eyes?



4. Tracy does a survey about favourite types of music. She draws a frequency table.

Draw a neat bar chart of the information, clearly labelling the axes.

How many people took part in this survey?

Music	Frequency
Jazz	7
Rock	17
Рор	25
Rave	19
Funk	23

5. Bob goes on a cycle ride and plots these points on his jouney.

Time	9am	10am	11am	11.30am	12.30pr	n 2pm	3.30pm	5pm	5.30pm	6pm
Distance(Km)	0	5	15	15	30	30	35	50	55	55

- a). Draw a set of axes. Across the bottom label it **Time** and mark from 9am to 6pm. Up the side label it **Distance travelled** (in **Km**) and mark it from 0 to 55Km.
- b). Plot the points in the table and join them up with straight lines. Use your graph to answer these questions.
- c). How long did Bob stop for lunch?
- d). In which hour period of time did he cycle fastest ?
- e). How far had he cycled by i). 10.30am ii). 4pm iii). 12pm?
- f). What time was it when Bob had cycled i). $2\frac{1}{2}$ Km ii). 45Km iii). 25Km ?

6. 200 pupils were asked their favourite subject in school. The table below shows the results:

Draw a pie chart of this information, clearly labelling each section.

Subject	Number of pupils
Maths	60
English	20
PE	80
Music	40

- 7. For each set of values, calculate: (i) the range (ii) the mean.
 - (a) test scores: 35, 42, 19, 26, 53
 - (b) Shoes sizes: -4, $4\frac{1}{2}$, $2\frac{1}{2}$, 3, 5, $3\frac{1}{2}$, $4\frac{1}{2}$, 5



- (c) Loose change: 84p, 18p, 9p
- (d) Length of index finger:- 5.9cm, 7.6cm, 6.4cm, 5.7cm, 6.9cm, 7.1cm
- 8. For this quadrilateral find:-
 - (a) the range of lengths
 - (b) the mean length
 - (to 1 decimal place)



Answers Fractions

1. $A = \frac{2}{6}$ $B = \frac{3}{6}$ $C = \frac{1}{2}$ $D = \frac{1}{3}$ $E = \frac{3}{9}$ $F = \frac{4}{8}$ $G = \frac{2}{4}$

Matching: A = D = E, B = C = F = G

2. These are some of the acceptable answers – there are lots more – please check with you teacher if you are not sure if your answer is correct:

a) $\frac{4}{6}$	$\frac{1}{5}, \frac{6}{9}, \frac{8}{12}, \frac{10}{15}, \frac{12}{18}$	$\frac{20}{30}$ b)	$\frac{2}{8}, \frac{3}{12}, \frac{4}{16}$	$\frac{5}{20}, \frac{6}{24}, \frac{10}{40}$					
c) -	$\frac{6}{10}, \frac{9}{15}, \frac{12}{20}, \frac{15}{25}, \frac{12}{25}$	$\frac{18}{30}, \frac{30}{50}$ d)	$\frac{8}{18}, \frac{12}{27}, \frac{1}{3}$	$\frac{16}{6}, \frac{20}{45}, \frac{24}{54}, \frac{40}{90}$					
3. a)	5 7	b)	$\frac{1}{3}$	c)	$\frac{6}{7}$		d)	$\frac{3}{4}$	
4. a)	$6\frac{1}{4}$	b)	$2\frac{4}{5}$	c)	$7\frac{5}{7}$		d)	$3\frac{5}{20}$	
5. a)	<u>8</u> 5	b)	$\frac{44}{9}$	c)	$\frac{37}{10}$		d)	$\frac{11}{4}$	
6. a)	³ / ₅ b)	$1\frac{7}{15}$ 0	c) 3 ⁵ / ₈	d) $6\frac{3}{10}$	e) $\frac{2}{7}$	f) $\frac{1}{2}$		g) 3 ⁵ / ₁₂	h)2 ² /3
7. a)	£90	b) 3	38 <i>kg</i>	c)	\$360		d)	£14700	

8. Jane needs to put the decimal point in and carry the remainder so the division sum looks like this:

1 5·5	the next step is: 15.5	and since money always has 2 decial places,
$6 9^{3} \overline{3.0}$	<u>x5</u>	the answer is £77.50
	77.5	
	2 2	•

Decimals

1(a) 4.3	(b) 126.8	(c) 88.0	(d) 200.0					
2(a) 138.244	(b) 98.379	(c) 47.880	(d) 5672.339					
3(a) 5000 + 300	00 = 8000	(b) 9000 – 50	00 = 8500	(c) 10000 ÷ 200 = 50				
(d) 800 x 600	= 480000							
4(a) 596.073	(b) 258.35	(c) 582.692	(d) 132.41	5. Less than 9.75seconds				
6. Ellen does not have enough money as she had \$90 and needs \$91.85.								
7. 0.473cm	8. 4.96	53m 9	. £59.85	10. £26				

Length and Perimeter

1(a) 900cm	(b) 7cm	(c) 62cm	(d) 2.2cm	(e) 530cm	(f) 850cm
2(a) 6km	(b) 0.07km	(c) 3400km	(d) 90.53km	(e) 0.125km	(f) 5.5km

3. 1.41m	4. 4.2	2km	5. 57	2cm or 5.72m	1		
6(a)15cm	(b) 35inches	(c) 36ft	(d) 13	3km			
7. 14.7m or 147	70cm 8. W	/idth = 9m	Perimeter 54	łm			
9(a) 2a + a + 2a	+ a = 6a	(b) L + L -	+ L + L = 4L	(c) 3x + 5x	+ 3x = 13x		
10(a) P=28cm	A=45cm ²	(b) P=30cm	A=30cm ²	(c) P=34cm	A=38cm ²	(d) P=29cm A=	28cm²
11. P=440cm or	⁻ 4.4m						

Statistics

1. ai 7	ii 16	ii 23	b 6	c 49		
2a 1	b 5	c 14	d 11	e 13	f 20	g 100

3a green 30%, hazel 20%, brown 30%, grey 10%

b green 13, hazel 26, brown 39, grey and blue 52



4b) 91 people took part in the survey

6.





c) 2 hours

d) 11.30am – 12.30pm

ei) 10km ii) 35km iii) 30km

fi) 9.30am ii) 4.30pm iii) 12.15pm

7. Question Range Mean 34 35 а b 2.5 4 75 37 С d 1.9 6.6

8. a) 3.1m b) 5.9cm (to 1 dp)