



Mathematics Department

R1 Homework

These questions should be attempted WITHOUT the use of a calculator, unless it is stated that a calculator may be used.

Answer ALL questions in your homework jotter.

ALL WORKING MUST BE SHOWN.

Number your questions clearly.

Calculators may be used when you see



NAME	CLASS	TEACHER

- 1. Calculate:
- a. 577 328
- b. 24·6 + 567
- c. 52·4 13·02
- 2. Simplify each expression:
- a. 5a + 2a + 4a
- b. 6y 4y
- c. 8x + 3x 5x
- 3. Calculate:
- a. 18 × 4
- b. 654 × 7
- c. 145 ÷ 5
- 4. If a = 4 and b = 2, find the value of:
- a. a + b
- b. 2a + 4b
- c. ab b
- 5. Copy the list of numbers and circle the multiples of 6:
 - 9 12 24 35 44 56 60

- 1. Simplify each expression:
 - a. 4f + 6f +5f b. 2a + 6a - 3a c. 7t - 4t + 2t
- 2. Calculate:
 - a. 178 159
 - b. 28 19 + 78
 - c. 189·6 + 29
- 3. If x = 4, y = 5 and z = 6, evaluate the following expressions:
 - a. 2x + y b. x + 2y z c. xy
- 4. Calculate:
 - a. 154 × 6
 - b. 288 ÷ 4
 - c. 14 × 8
- 5. Copy the list of numbers and circle the factors of 48:
 - 1 5 6 8 9 12

1. Calculate:				
a. 274 - 166	b.	14•6 + 156 - 3	81.8	
2. Round the follow	ving to	1 decimal place	e:	
a. 16·25	b.	356.245	с.	6.79
3. Simplify the follo	owing e	expressions:		
a. 3x + 6x - 2x	b.	7y + 5x - 3y	с.	9a - 3a + 4b
4. Calculate:				
a. 4 × 18 × 25	b.	1·65 × 10	c.	3∙05 ×10000
5. If a = 6 and b = 3	, calcu	late the value	of:	
a. 3a + 2b	b.	ab	c.	3ab
6. Write down all th	ne fact	ors of		
a 10	h	74	C	30

- 1. Calculate:
 - a. 17·2 × 100 b. 15·88 × 10000 c. 3·6 × 10
- 2. Simplify the following expressions:
 - a. 5a + 6a 2a b. 7x + 2y 3x c.4p + 2r - 3p - r
- 3. Calculate:
 - a. 14 ÷ 5 b. 16·44 + 3·2 c. 2·5 × 6
- 4. Calculate:
 - a. 17·2 + 2·44 b. 15·6 3·8
 - c. 13·2 + 2·4 5·5

5. Copy the list of numbers and circle the square numbers:

3 9 12 16 24 36 56 64 88 100

1.	Simplify the followi	ng ex	pressions:			
	a. 3t + 2r + 3t - 2r		b. 7a +	5b -	3a + 3	2b
2.	Round the following	g num	bers to 1	decin	nal pl	ace:
	a. 3·56	b.	21.34	с.	21.9	9
3.	Calculate:					
	a. 17÷5	b.	99 + 38·6	- 3.0	2	c. 19 + 7 × 4
4.	If a = 4, b = 2 and c	= 1,	find the v	alue (of:	
	a. a + b - c	b.	3a + 2c		c.	ab - 3c + 4b
5.	Calculate:					
	a. 6·45 × 100	b.	23•5 × 30		c.	139·4 ÷ 200

1.	Calculate:				
	a. 137 + 243 - 24	.9	b. 342 - 187		
2.	Round to 1 decin	nal pl	ace:		
	a. 27·42	b.	429.835	c.	7.99
3.	Simplify the follo	owing	expressions:		
	a. 8x + 4x - 6x	b.	12a + 3b - 8a	с.	4a - 3a + 2b
4.	Calculate:				
	a. 2·43 × 10	b.	3·74 ×1000	с.	25 × 54 × 4
_		, ,		c	
5.	If $a = 4$ and $b = 7$, calo	culate the value	e of:	
	a. 2a + 3b	b.	5b - 3a	c.	5ab
6.	Write down all th	ne fao	ctors of:		
a.	32	b.	36	c.	48

1. Calculate: a. 43·2 × 100 b. 24·73 × 1000 c. 4·7 × 10 2. Simplify the following expressions: a. 14a + 3b - 5a b. 4x + 5y - 3x c. 5t + 4s - 3t + 6s 3. Calculate: b. 23.46 + 8.2 c. 48 ÷ 5 a. 5·3 × 8 4. Round the following numbers to 1 decimal place: c. 49.99 a. 2·43 b. 53·749 5. If a = 5, b = 3 and c = 7, calculate the value of: a. a + b + c b. 5ab - 3c c. abc 6. Calculate: b. 3.6×400 c. $48.3 \div 30$ a. 32·4 × 40

1.	Round to the r	neare	st whole numbe	er:	
a.	276.38	b.	5.5	с.	16.56
2.	Calculate:				
a.	263 × 20	b.	306 × 300	c.	48 × 5000
3.	Calculate:				
a.	3 × 20 + 12	b.	7 + 3 × 12	с.	3 × (5 + 7)
4.	Round to 1 dec	cimal	place:		
	a. 15·35	b.	28.336	c.	2.55
5.	Calculate:				
	a. 260 ÷ 20	b.	55000 ÷ 50	c.	21300 ÷ 300
6	Calculate sho	wing	working clearly	<i>,</i> •	
	a. 234 × 25	b.	310 × 46	•	

Problem Solving 1

Chris has to write a 3000 word essay. She estimates that she can fit 55 lines of type on each page, and about 14 words in each line.



How many sides of paper will she use?

- Round to 2 decimal places:

 a. 2·3445
 b. 13·76
 c. 4·398

 Calculate:

 a. 216·4 ÷ 20
 b. 32·4 × 300
 c. 42·11 × 500

 Copy these sequences, filling in the missing numbers:
 - a. 3, 8, 13, 18, <u>, , , ,</u> b. 88, 77, 66, 55, <u>, , , ,</u> c. 7, 11, 15, 19, <u>, , , , </u>
- 4. Calculate, showing working clearly:
 - a. 82 × 35 b. 714 × 33
- 5. Change to cm:
 - a. 23cm b. 3·4m c. 46mm

Problem Solving 2

182 pupils and 9 teachers are going on a theatre visit. They hire 42 seater buses.

- a. How many buses will they need?
- b. Will there be extra seats if any more pupils decide to go?



1. Calculate: b. 170 × 20 c. 12 × (8 - 5) a. 23 + 2 × 8 2. Round to 1 decimal place: 45.246 a. 17.66 b. c. 3.98 3. Fill in the next three numbers of the sequences: a. 12, 15, 18, __, __, __ b. 27, 22, 17, __, __, ___ c. 1, 4, 9, 16, __, __, __ 4. Calculate: a. 42 × 400 b. 15 ÷ 4 c. 3.05 × 10000 5. Copy the numbers below and circle the prime numbers: 2 25 3 40 47 1 7 49 6. Write down all the factors of: 25 с. a. 12 b. 36 Problem Solving 3 An electrician has 100 metres of wire on a drum. He uses 13.6m and 28.7m of wire in one house, and the same lengths again in another house. What length of wire will be



left?

1. Calculat	e:					
a.8+3	× 5	b.	2030 ÷ 500	с.	27.7	7 × 40
2. Simplify	the follow	ing e	xpressions:			
a. 6a + 3	3b - 5a	b.	12x + 3 - 4x - 3			
b. 5r + 5	t - 3r - 4t					
3. Calculat	e:					
a. 12 ÷ 5	5	b.	32.6 + 2.5		с.	4∙6 ×
12						
4. Calculat	e:					
a. 3 + 15	5 × 4	b.	5 × 4 + 3			
5. Calculat	e:					
a. 23 × 4	45	b.	$\sqrt{49}$		с.	6 ²

Problem Solving 4

In a test $\frac{1}{5}$ of the pupils will be given an A grade, $\frac{1}{2}$ a B grade, $\frac{1}{4}$ a C grade, and the rest a D grade. Out of the 40 pupils, how many will get each grade?



1. Simplify the fo	llowi	ng expressio	ns:					
a. 2a + 3c - a	+ 5c	b. 6x + 3	y - 6x +	2y c.12p + 4 - 5p				
2. Round the follo	owing	numbers to	1 decin	nal place:				
a. 3·09	b.	23·34 c	:. 16·9	99				
3. Calculate:								
a. 21·4 ÷ 5	b.	15 + 3·2 - 3	8∙02	c. 12 + 7·1 × 3				
4. If a = 5, b = 3	4. If a = 5, b = 3 and c = 1, find the value of:							
a.a+b-c	b.	3a + 2c	с.	ab - 3c + 4b				
5. Calculate:								
a. 6·45 × 300	b.	23·5 × 60	C.	29·4 ÷ 200				
Problem Solving !	5							
Kevin counts mor and money he tal	ney pa kes oi	aid into his l ut as negativ	oank acc /e. How	ount as positive, much did he have				

+£10 +£5 -£20 -£5 +£10 -£5 +£30

in his account after each pay-in and pay-out shown below?

1. Round to 1 de	ecima	l plac	e:				
a. 276·38	b.	5.55	б с	. 1	16.59	96	
2. Calculate:							
a. 15 - 3 × 5	b.	2.45	5 + 15.5	5 c		16.5	96
3. Express the fo	ollow	ing fra	actions	in th	eir s	simpl	est form:
a. $\frac{25}{40}$	b.	50 720		C	2.	$\frac{12}{16}$	
4. Calculate, giv	ving y	our ai	nswer ir	n the	sim	plest	form:
a. $\frac{2}{5} + \frac{1}{5}$	b.	$\frac{3}{4} + \frac{3}{2}$	12	C		$2\frac{5}{6}$ –	$-\frac{1}{6}$
5. Simplify:							
a. 2x + 3y - 2x -	3у	b.	5a + 2	a - 3	b	c.	4 + 2c - 3
6. Write down:							
a. √25		b.	7 ²			c.	2 ³
Problem Solving 6							
200 pupils an They hire 52	d 5 te seate	eache r buse	rs are g es.	oing	on a	a scho	ool trip.



- a. How many buses will they need?
- b. How many empty seats will there be?

1. Calculate:

a. $\frac{2}{5} + \frac{3}{5}$ b. $\frac{5}{8} - \frac{1}{2}$ c. $\frac{1}{3} + \frac{4}{5}$

2. Calculate:

a. 216·4 × 20 b. 27·36 × 1000 c. 4·772 ÷ 10

3. Calculate:

a. 23 × 42 b. 145 × 43

4. If a = 4 and b = 6, find the value of:

a. 2a + 3b b. ab c. 2(a + 3b)

5. Calculate:

a. $\frac{1}{4}$ of 24 b. $\frac{2}{5}$ of 55 c. $\frac{2}{7}$ of 21

Problem Solving 7

Seaview restaurant is spending £1800 on new tables and chairs.

The owner buys 20 tables costing £60 each.

How many chairs can he buy at £8 each?

1. Calculate:					
a. 16 - 2 × 5	b.	150 × 200	с.	2·35 ÷ 50	
2. Round to the	e neare	est whole nu	mber:		
a.21·88	b.	12.35	с.	157.9	
3. Simplify:					
a.2a + 3b - a	b.	5x + 3x - 2y	/		
4. Find: a. $\frac{2}{5} + \frac{1}{2}$	b.	$\frac{5}{8} - \frac{1}{4}$	C. $\frac{2}{3}$	of £45	
5. Copy the nur	nbers	below and ci	ircle the	factors of 1	2:
1234	57	9 10 ·	12 24		
6. Simplify: a. ²¹ / ₃₀	b. $\frac{30}{40}$	<u>)</u>	C. $\frac{45}{70}$		
Problem Solving	<u>g 8</u>				
		. 1 c u			

My petrol tank was exactly $\frac{1}{4}$ full. It took 24 litres of petrol to fill the tank up. How many litres does my tank hold altogether?

1. Simplify the following expressions: a. 5x - 3y + 2x b. 2 + 5a - 2 c. 15w + 2d - 4w - d 2. Calculate, giving your answer in its simplest form: a. $\frac{2}{5} \times \frac{7}{8}$ b. $\frac{5}{6} + \frac{2}{3}$ c. $\frac{5}{8} - \frac{1}{2}$ 3. Calculate: a. $\frac{3}{7}$ of 21g b. $\frac{5}{8}$ of 64g c. $\frac{2}{5}$ of 550m 4. Round to 2 decimal places: a. 2·345 b. 4·988 c. 8.999 5. Calculate: a. 3·4 × 100 b. 12·66 ÷ 10 c. 2·1 × 20 Problem Solving 9 Lee gives his Dad a puzzle. "Five times my age plus 10 years, makes 70. How old am I?" Make an equation and solve it to find out how old Lee is?

His Dad replied, "Four times my age less 10 years is 130."

How old is Lee's Dad?

1. Simplify the following expressions: a. 5x - 3y + 4x b. 3 + 4a - 3 + 5a c. 6xy + 2xy - 3 2. Express these fractions in their simplest form: $\frac{50}{55}$ a. $\frac{12}{24}$ C. $\frac{27}{33}$ b. 3.Calculate: a.5 $\times \frac{2}{5}$ b. $\frac{3}{8} \times 16$ **c.** $\frac{2}{3} \times \frac{4}{5}$ 4. If a = 5, b = 3 and c = 1, find the value of: a. 2a - 3b + c b. ab - 2c c. 3ac - 4b 5. Calculate: a. 23.86 + 3.9 b. 15.6 - 2.78

Problem Solving 10

The bill for a holiday to Austria for a party of six, two of which were children, came to £2020.

As one child was only 8 years old, he got free.

The remainder of the cost was split equally among the adults.

What did it cost each adult for the holiday?





a £2 tip from her change. How much has she left from her £40?



a. $\frac{1}{4}$ of 24 b. $\frac{2}{5}$ of 15 c. $\frac{5}{7}$ of 21

2. Calculate the value of angles a and b:



- 3. Calculate: a. 12 - 15 b. -2 + 10 c. -13 + 18
- 4. If a = 3 and b = 5, find the value of:
- a. 2a + 3b b. ab c. 2 (a + 3b)

5. Calculate:

a. $\frac{3}{5} + \frac{1}{4}$ b. $\frac{2}{5} \times \frac{4}{7}$ c. $\frac{4}{5} \times \frac{5}{8}$

Problem Solving 11

A fish tank is 1m long, 25cm wide and 20cm deep. How many litres of water does it hold?



1. Calculate:

a. -8 + (-2) b. 5 - (-4) c. -3 - (-7)

2. Find the value of a, b and c:





- 3. Calculate:
 - a. 21·4 × 200 b. 36·05 ÷ 50
- 4. Find:
 - a. $\frac{3}{4} \frac{2}{5}$ b. $\frac{4}{5}$ of 24 c. $\frac{2}{3} \times \frac{5}{6}$
- 5. Calculate:
 - a. 5 + 4 × 2 b. 6 + (3 1) c. 7 3 × 2

6. Write down:

a. $\sqrt{36}$ b. 5^2

Problem Solving 12

In a garden $\frac{1}{3}$ of the area is used for vegetables and $\frac{2}{5}$ for flowers and paths. If the rest of the garden consists of lawns, what fraction of the garden is given to lawns?

1. Simplify the following expressions:

a. 2a + 3a - 4a b. 2c + 5d - 3c c. 2y - 3x + 4y + 3x

2. Calculate, giving your answer in its simplest form:

a. $\frac{5}{8} + \frac{3}{4}$ b. $25 \times \frac{2}{5}$ c. $\frac{3}{8} \times \frac{6}{7}$

3. Find the values of a, b, and c:



4. Round to 1 decimal place:

a. 12·22 b. 3·45 c. 6·99

5. Calculate:

a. -12 - 2 b. 15 - (-12) c. 23 + (-6)

Problem Solving 13

A bowling green is a square of side 35m.

What is the cost of returfing it at $\pounds 2.70$ per m²?

