

Welcome to the Key Skills Training Program. These sheets are designed to give you multiple opportunities to learn and revise key mathematical skills. Completing these sheets will help you become equipped with the skills you need to be a successful user of mathematics in school and also every day life. The following points will help you get the most out of the program. Enjoy!

- The first two pages of each sheet are technology free and you are **not allowed** to use a calculator.
- The third page of each sheet is technology active and you are **allowed** to use a calculator.
- When you see the <sup>(S)</sup> symbol include some working to support your answer. This could involve a calculation, annotating a diagram or an explanation of your thought process.
- All fractional answers must be given in simplified form.
- You may be able to complete very few questions or almost all of them, it doesn't matter. As long as you give your best effort and try to improve each time you are maximising your success!
- If you feel that some or all of these questions aren't suitable for you, have a chat with your teacher.

Every skill within this booklet connects to an online skill development page containing instructional videos and practice questions. Head to the website below to learn more!

## Webpage: https://mathsquad.org/KS2

Time to get started on Sheet 1. Turn the page and complete the questions on pages 2, 3 and 4.

Mathsquad has been created by Dr Wendy Taylor.

	Key Skills Training Level 2	Name:
mathsquad	Sheet 1	Due date:
<b>Step 1:</b> $\bigstar$ Start a timer $\bigstar$ Compl	ete the 30 questions in the Quick Quiz $\star$	Stop the timer $\bigstar$ Record your time
Times Tables	Key Skills	Key Skills (continued)
1. $\square \times 9 = 18$	11. $ + 3 = 10 $	21. $1594 + 781 =$
2. $10 \div \square = 10$	12. $2 + \square = 4$	22. $537 - 163 =$
3. $5 \times \square = 5$	13. $4 + 7 =$	23. $171 \times 6 =$
4. $\Box \div 5 = 1$	14. $34 + 7 =$	24. $8181 \div 9 =$
5. $6 \times \square = 18$	15. $65 - 9 =$	$25. \ 2 \times \boxed{} = 36$
$6.  \bigcirc \div 1 = 9$	16. $64 - 56 =$	26. $3 \times \boxed{} = 57$
7. $6 \times \square = 30$	17. $4 \times 4 =$	27. 5 × $$ = 90
8. 56 ÷ $= 7$	18. $6 \times 12 =$	28. Factors of 52:
9. $\longrightarrow 12 = 144$	19. $4 \div 2 =$	29. When simplified, $\frac{15}{45} =$
10. $2 \div 4 = 8$	20. $49 \div 8 =$ rem.	30. $\frac{1}{24} + \frac{4}{8} =$
		Time: Score:

Quick Quiz working out space

Step 2: $\star$ Complete these 23 questions					
$\bigstar$ Do not use a calculato	r ★ Includ	le working out when	you see the 🏾 symb	$tool \star Simple$	plify all fractional answers
1. Calculate	2. Calcu	late	3. Calculate		4. Second Calculate $(7-5)^5$
a. $-3 + 7 =$	a2	+ -4 =	a. $3^2 =$		
b. $-3 - 2 =$	b. 3 –	3 =	b. $\sqrt{100} =$		
5. Circle any words that	6. Write	38 as a product of	7. a. Find the HCI	F of 4	8. Fill in the boxes to make
describe the number 48.	powers o	f prime numbers.	and 8.		each equation true.
even square mult. of 3					a. $3 = \frac{1}{4}$
			b. Find the LCM and 20.	M of 5	b. $5\frac{1}{4} = \frac{1}{4}$
					c. $2 \frac{9}{4} = \frac{9}{4}$
9. $(3, \frac{16}{18} + \frac{5}{9})$	10. $\frac{1}{2} \times \frac{1}{2}$	<u>8</u> 10	11. $\bigcirc \frac{2}{11} \div \frac{7}{3}$		12. S $3\frac{1}{3} \div 5$
13. a. What is the place	14. Inser	t <, = or >	15. a. $3400 \div 10 =$		16. Complete the table
value of the 2 in 15.29?	between	the decimals and, if			below
	possible,	circle the biggest.	b $23.02 \times 10 -$	_	P F D
b. Round 0.055 to 1	1.	.85 1.84	0. 20.02 × 10 -	-	$\frac{33}{50}$
decimal place (1 dp.)					
			c. $695 \times 100 =$		
	<b>A</b>				
17. $3.8 + 1.57$	18. 🕸 1	$.6 \times 0.05$	19. So $2.22 \div 0.4$		20. Sigma Calculate 9% of 18
21. a. Substitute $x = 5$ in	nto	22. Solve the e	quations below and	23. Plot	the point $A = (-3, 3)$ below
x + 10 and evaluate.		include working the	at shows your use	and state	e the coordinates of point B.
		of an opposite oper	ration.		y .
		a.	7 — 19		3 †
		x + t	- 14		
b. Substitute $x = 8$ into a	8x and	b.			
evaluate.		3x =	15	-3 -2 -	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
				-	-2
				-	$-3 \qquad B = ( , )$

Step 3: ★ Complete these 5 questions ★ You may use a calculator ★ Include working out when you see the 🌯 symbol				
$\boxed{24. ^{\textcircled{0}}}$ Calculate the perimeter and area	a of the shape	25. Consider the di	25. Consider the diagram below.	
below. Give your answers to the nearest whole number.				
19.5 <i>cm</i>			X	
			$> 43^{\circ}$	
$10.2cm \neq 9.9cm$	ŧ			
			$\theta^{\circ} \varphi^{\circ}$	
			r l	
P =		a. State the size of	the unknown angles.	
A —		00	0	
		$\theta^{\circ}$	$=$ $\varphi^{\circ} =$	
		b. What is the rela	tionship between $\theta$ and $\varphi$ ?	
26 a $\bigotimes$ What is the size of angle $\beta$ ?	27 A bag contains	13 balls numbered	28 $\bigcirc$ Calculate the following	
20. a. $=$ () hat is the size of angle $p$ .	1 to 13. A ball is ra	andomly selected.	statistics for the below data set	
	a. What is the sam	ple space?		
			7, 0, 5, 3, 4, 3	
62°			a. median =	
34°	b. What is the pro	bability of selecting		
	a ball with an odd	number?	b. mean to 1 dp. $\approx$	
b. Which word(s) classifies the			c. mode =	
triangle?			d range -	
sealono right isoseolos equilatoral			u. range –	
scalene right isosceles equilateral				
<b>Step 4:</b> $\bigstar$ Complete any additional weekly tasks in the space below $\bigstar$				
Instructional videos and practice questions for each skill can be found at mathsquad.org/ks2				

Extra space for work, thoughts, comments or questions

more space from page 42 onwards if needed

	Key Skills Training Level 2	Name:
mathsquad	Sheet 2	Due date:
<b>Step 1:</b> $\bigstar$ Start a timer $\bigstar$ Compl	ete the 30 questions in the Quick Quiz $\bigstar$	Stop the timer $\bigstar$ Record your time
Times Tables	Key Skills	Key Skills (continued)
1. $\square \times 4 = 24$	11. $-+1 = 10$	21. $128 + 2084 =$
2. $132 \div  = 12$	12. $2 + \square = 4$	22. $1418 - 721 =$
3. $8 \times \square = 32$	13. $5 + 8 =$	23. $9 \times 864 =$
$4. \qquad \div 2 = 9$	14. $9 + 57 =$	24. $5453 \div 7 =$
5. $7 \times \square = 14$	15. $33 - 9 =$	25. $2 \times \boxed{} = 70$
$6. \qquad = 4$	16. $81 - 75 =$	26. $3 \times \boxed{} = 90$
7. $1 \times \square = 12$	17. $8 \times 8 =$	27. 5 × $= 140$
8. $16 \div \square = 8$	18. $7 \times 3 =$	28. Factors of 19:
9. $\longrightarrow 7 = 84$	19. $90 \div 10 =$	29. When simplified, $\frac{8}{16} =$
10. $2 \div 8 = 11$	20. $27 \div 6 =$ rem.	30. $\frac{3}{18} + \frac{4}{6} =$
		Time: Score:

Quick Quiz working out space

Step 2: $\star$ Complete these 23 questions					
$\bigstar$ Do not use a calculato	r ★ Inclue	le working out when	you see the 🍩 symb	$tool \star Simple$	plify all fractional answers
1. Calculate	2. Calcu	late	3. Calculate		4. $\bigcirc$ Calculate $(5-1)^2$
a. $0 - 7 =$	a3	+ -6 =	a. $1^2 =$		
b. $3 - 4 =$	b. 2 -	2 =	b. $\sqrt{36} =$		
5. Circle any words that	6. Write	64 as a product of	7. a. Find the HCI	F of 8	8. Fill in the boxes to make
describe the number 15.	powers c	f prime numbers.	and 24.		each equation true.
odd prime mult. of 2					a. $2 = \frac{1}{3}$
			b. Find the LCM and 9.	M of 2	b. $3\frac{1}{3} = \frac{1}{3}$
					c. $2 \frac{1}{3} = \frac{7}{3}$
9. (2) $\frac{2}{3} + \frac{1}{18}$	10. $\frac{4}{8} \times$	$\frac{4}{11}$	11. $\bigcirc \frac{4}{11} \div \frac{9}{12}$		12. $3\frac{5}{6} + 2\frac{3}{6}$
13. a. What is the place	14. Inser	rt <, = or >	15. a. $800 \times 10 =$		16. Complete the table
value of the $3$ in $4.7036$ ?	between	the decimals and, if			below
	possible,	circle the biggest.	b. $1.28 \times 10 =$		P F D
b. Round 3.5842 to 2	1.	06 1.053			$\begin{array}{ c c c }\hline & \underline{22} \\ \underline{25} \\ \hline \end{array}$
decimal places (2 dp.)			$c_{-} 5 \div 100 -$		
			C. 5 ÷ 100 =		
17. S $2.8 + 2.89$	18. 🕸 (	0.5  imes 0.5	19. $0.0264 \div 0.0$	04	20. $^{\bigotimes}$ Calculate 5% of 30
21. a. Substitute $x = 16$	into	22. Solve the equation $22$ .	quations below and	23. Plot	the point $A = (3, -1)$ below
x - 8 and evaluate.		of an opposite oper	at snows your use	and state	e the coordinates of point B.
		a.			$y_3 \ddagger$
		x-4	l = 3		2
b Substitute $r = 4$ into $3$	8 m and	b.		•_B	1
evaluate. $\sim$ Substitute $x = 4$ into (	Ja anu	$\frac{x}{5} = 0$	6	-3 -2 -	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
				-	-2
				-	_3
				B = (	, )

<b>Step 3:</b> $\bigstar$ Complete these 5 questions	$\bigstar$ You may use a ca	lculator $\bigstar$ Include w	vorking out when you see the $^{\bigotimes}$ symbol
24. $^{\odot}$ Calculate the perimeter and area of the shape		25. Consider the di	iagram below.
24. Calculate the perimeter and area of the shape below. Give your answers to the nearest whole number. 19.6mm $9.8mm$ $7.8mm$ $P =$ $A =$		a. State the size of $\theta^{\alpha}$ b. What is the rela	$\frac{1}{54^{\circ}} \frac{1}{\theta^{\circ}} \frac{1}{\theta^{\circ}}$ The unknown angles. $\varphi^{\circ} = \varphi^{\circ} = \varphi^{\circ} = \varphi^{\circ}$ ationship between $\theta$ and $\varphi$ ?
<ul> <li>26. a. What is the size of angle β?</li> <li>51° 51°</li> <li>β°</li> <li>b. Which word(s) classifies the triangle?</li> </ul>	<ul><li>27. A bag contains</li><li>1 to 10. A ball is rational is the same and the same b. What is the property of a ball with an odd</li></ul>	10 balls numbered andomly selected. aple space? bability of selecting number?	<ul> <li>28. Calculate the following statistics for the below data set 5,0,5,4,9</li> <li>a. median =</li> <li>b. mean to 1 dp. =</li> <li>c. mode =</li> <li>d. range =</li> </ul>
scalene right isosceles equilateral			u. range =
<b>Step 4:</b> $\star$ Complete any additional weekly tasks in the space below $\star$			
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Extra space for work, thoughts, comments or questions

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	Key Skills Training Level 2	Name:
mathsquad	Sheet 3	Due date:
<b>Step 1:</b> $\bigstar$ Start a timer $\bigstar$ Compl	ete the 30 questions in the Quick Quiz $\bigstar$	Stop the timer $\bigstar$ Record your time
Times Tables	Key Skills	Key Skills (continued)
1. $\times 5 = 20$	11. $ + 10 = 10 $	21. $641 + 2073 =$
2. $77 \div  = 7$	12. $- + 0 = 6$	22. $872 - 757 =$
3. $1 \times \square = 2$	13. $5 + 8 =$	23. $4 \times 814 =$
$4. \qquad \div 2 = 11$	14. $9 + 67 =$	24. $4620 \div 6 =$
5. $12 \times \square = 108$	15. $22 - 5 =$	25. $2 \times \boxed{} = 30$
$6.  \bigcirc \div 3 = 2$	16. $62 - 53 =$	26. $3 \times \boxed{} = 72$
7. $6 \times \square = 42$	17. $9 \times 12 =$	27. 5 × $$ = 130
8. $120 \div  = 12$	18. $12 \times 7 =$	28. Factors of 37:
9. $\longrightarrow 11 = 121$	19. $36 \div 9 =$	29. When simplified, $\frac{16}{36} =$
10. $2 \div 8 = 9$	20. $31 \div 11 =$ rem.	$30. \ \frac{2}{4} + \frac{4}{20} =$
		Time: Score:

Quick Quiz working out space

Step 2: $\star$ Complete these 23 questions					
$\bigstar$ Do not use a calculato	r ★ Incluc	le working out when	you see the 🏾 sym	bol $\star$ Sim	plify all fractional answers
1. Calculate	2. Calcu	late	3. Calculate		4. Salculate $(22+2) \div 6$
a. $-2 + 7 =$	a3	3 =	a. $1^4 =$		
b4 + 1 =	b. 0 –	1 =	b. $\sqrt{144} =$		
5. Circle any words that	6. Write	88 as a product of	7. a. Find the HCI	F of 84	8. Fill in the boxes to make
describe the number 22.	powers o	f prime numbers.	and 40.		each equation true.
odd square mult. of 2					a. $3 = \frac{1}{7}$
			b. Find the LCM and 28.	M of 7	b. $1\frac{1}{7} = \frac{1}{7}$
					c. $1 \frac{1}{7} = \frac{10}{7}$
9. (b) $\frac{5}{9} + \frac{34}{45}$	10. $\frac{2}{9} \times \frac{1}{9}$	38	11. $\bigcirc$ $\frac{2}{4} \div \frac{3}{4}$		12. (2) $2\frac{2}{3} \times 5$
13. a. What is the place	14. Inser	t <, = or >	15. a. $50 \times 10 =$		16. Complete the table
value of the 1 in $75.814$ ?	between	the decimals and, if			below
	possible,	circle the biggest.	b 0.10 × 10 -		P F D
b Bound 5.97 to 1 decimal	0	0.5 0.36	$0.0.19 \times 10 =$		0.82
place (1 dp.)					
			c. $0.8 \times 100 =$		
17. $2.56 + 1.7$	18. 🕸 (	0.5  imes 3.8	19. $0.558 \div 0.2$		20. $\bigotimes$ Calculate 2% of 20
21. a. $\Im$ Substitute $x = 9$ in	nto $x+5$	22.  Solve the e	quations below and	23. Plot	the point $A = (-3, 3)$ below
and evaluate.		include working the	at shows your use	and state	e the coordinates of point B.
		of an opposite oper	auon.		$\frac{y}{2}$
		r = 7	7 = 8		v 2↓
			-		
b. Substitute $x = 10$ into	5x and	b.			
evaluate.		$\frac{x}{2} = 7$	7	-3 -2 -	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
					-2
					$-3 \downarrow \qquad \qquad B = ( , )$

Step 3: $\star$ Complete these 5 questions $\star$ You may use a calculator $\star$ Include working out when you see the $\otimes$ symbol			
24. $\bigcirc$ Calculate the perimeter and area	a of the shape	25. Consider the diagram below.	
below. Give your answers to the nearest whole number. 16.2mm $14.3mm \neq 12mm \neq 1$			$108^{\circ}$ $\varphi^{\circ}$
P =		a. State the size of	the unknown angles.
A =		$\theta^{\circ}$	$=$ $\varphi^{\circ} =$
		b. What is the rela	tionship between $\theta$ and $\varphi$ ?
26. a. $\mathbb{Q}$ What is the size of angle $\beta$ ? $\beta^{\circ}$ $32^{\circ}$	<ul><li>27. A bag contains</li><li>1 to 11. A ball is ra</li><li>a. What is the same</li><li>b. What is the probability of the</li></ul>	<ul><li>11 balls numbered</li><li>andomly selected.</li><li>aple space?</li><li>bability of selecting</li><li>bability of selecting</li></ul>	<ul> <li>28. S Calculate the following statistics for the below data set 5, 6, 3, 4, 2, 5, 0</li> <li>a. median =</li> <li>b. mean to 1 dp. ≈</li> </ul>
b. Which word(s) classifies the triangle? scalene right isosceles equilateral			c. mode = d. range =
Step 4: $\star$ Complete any additional weekly tasks in the space below $\star$			
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	Key Skills Training Level 2	Name:				
mathsquad	Sheet 4	Due date:				
<b>Step 1:</b> $\bigstar$ Start a timer $\bigstar$ Complete the 30 questions in the Quick Quiz $\bigstar$ Stop the timer $\bigstar$ Record your time						
Times Tables	Key Skills	Key Skills (continued)				
1. $\times 6 = 60$	11. $6 + \square = 10$	21. $1591 + 3029 =$				
2. $88 \div  = 8$	12. $-+5 = 8$	22. $915 - 532 =$				
3. $9 \times \square = 81$	13. $9 + 4 =$	23. $9 \times 222 =$				
4. $ : 3 = 4 $	14. $3 + 89 =$	24. 7386 $\div$ 6 =				
5. $8 \times \square = 8$	15. $44 - 8 =$	25. $2 \times \square = 28$				
$6. \qquad = 5 = 2$	16. $55 - 46 =$	26. $3 \times \boxed{} = 66$				
7. $10 \times \square = 90$	17. $12 \times 4 =$	27. 5 × $$ = 145				
8. $45 \div \square = 5$	18. $3 \times 8 =$	28. Factors of 25:				
9. $\square \times 10 = 20$	19. $33 \div 3 =$	29. When simplified, $\frac{90}{105} =$				
10. $2 \div 8 = 7$	20. $58 \div 11 =$ rem.	30. $\frac{1}{21} + \frac{5}{7} =$				
		Time: Score:				

Quick Quiz working out space

<b>Step 2:</b> $\star$ Complete these 23 questions						
★ Do not use a calculator ★ Include working out when			you see the 🛇 symt	bol ★ Simj	plity all fractional answers	
1. Calculate	2. Calcu	late	3. Calculate		4. $\bigcirc$ Calculate $(8+3)^2$	
a. $-1 - 4 =$	a. 3 –	-2 =	a. $9^2 =$			
b. $3 - 8 =$	b5	6 =	b. $\sqrt{121} =$			
5. Circle any words that	6. Write 63 as a product of		7. a. Find the HCF of 110		8. Fill in the boxes to make	
describe the number 30.	powers o	f prime numbers.	and 81.		each equation true.	
odd square mult. of 3					a. $12 = \frac{1}{5}$	
			b. Find the LCM and 4.	M of 2	b. $6\frac{3}{5} = \frac{1}{5}$	
					c. $3\frac{16}{5} = \frac{16}{5}$	
9. $(3)$ $\frac{1}{2} + \frac{7}{8}$	10. $\frac{3}{10} \times$	$\frac{6}{12}$	11. $^{(6)}$ $\frac{4}{12} \div \frac{3}{11}$		12. (2) $2\frac{4}{5} \times \frac{2}{3}$	
13. a. What is the place	14. Inser	t <, = or >	15. a. $99 \times 10 =$		16. Complete the table	
value of the $4$ in $3.074$ ?	between	the decimals and, if			below	
	possible,	circle the biggest.				
b. Round 0.096 to 1	0.4 0.457		b. $9.3 \times 10 =$		F         F         D           48%	
decimal place (1 dp.)						
			c. $65.03 \times 100 =$	=		
17. $4.89 - 2.9$	18. 🕲 (	$0.02 \times 1.6$	19. $0.84 \div 0.3$		20. 🕸 Calculate 70% of 87	
21. a. Substitute $x = 7$ into $x - 4$   22. Solve the equation of the equati		quations below and	23. Plot	the point $A = (-2, 2)$ below		
and evaluate.	include working that		at shows your use and state		e the coordinates of point B.	
		of an opposite oper	ration.		y .	
	a.				3 1	
x-5		0 = 3		$\begin{bmatrix} 2\\1 \end{bmatrix} \bullet B$		
b. Substitute $x = 27$ into $\frac{x}{2}$ and b.						
evaluate. $6x =$		54	-3 -2 -	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		
				-	-2	
				-	-3   B = ( , )	

Step 3: ★ Complete these 5 questions ★ You may use a calculator ★ Include working out when you see the 🏵 symbol						
24. $^{\textcircled{0}}$ Calculate the perimeter and area of the shape		25. Consider the diagram below.				
below. Give your answers to the nearest whole number.						
24.2cm 9.9cm 29cm		$36^{\circ}$ $\theta^{\circ}$ $\gamma$				
P =		a. State the size of the unknown angles.				
A =		$ heta^\circ = \qquad \qquad \varphi^\circ =$				
		b. What is the relationship between $\theta$ and $\varphi$ ?				
26. a. $\$ What is the size of angle $\beta$ ? $\beta^{\circ}$ 27° $63^{\circ}$	<ul><li>27. A bag contains 13 balls numbered</li><li>1 to 13. A ball is randomly selected.</li><li>a. What is the sample space?</li><li>b. What is the probability of selecting</li><li>a ball with an odd number?</li></ul>		<ul> <li>28. S Calculate the following statistics for the below data set</li> <li>3, 3, 2, 4, 2</li> <li>a. median =</li> <li>b. mean to 1 dp. =</li> </ul>			
<ul><li>b. Which word(s) classifies the triangle?</li><li>scalene right isosceles equilateral</li></ul>			c. mode = d. range =			
<b>Step 4:</b> $\star$ Complete any additional weekly tasks in the space below $\star$						
Instructional videos and practice questions for each skill can be found at mathsquad.org/ks2						