

Key Stage 2

Mathematics

Test 3: arithmetic (solutions)

Name						
Date of Birth	Day		Month		Year	
School						

Instructions

These solutions here correspond to the related exercise booklet. You can work on the tasks from the exercise booklet in class or at home independently. It is well known that repeated practising of exercises is more effective than re-reading information over and over again when it comes to revision. Therefore, you should try to follow the steps below:

- Always try to solve the exercise yourself first.
- Then compare your solution with the actual solution from this booklet. You will be able to check whether you have understood the task correctly or not.
- If you notice that you have not understood the task correctly, try solving it again.
- If you still have problems solving the task, ask your teacher or parent for help.
- Also make a note of the tasks you have difficulties with and try solving them again at a later time.
- Practicing the exercises should be spaced out over time so that it is most effective for you.

Best wishes!

1

3,020

 $= 3,000 + 20$

1 mark

		3	0	0	0												
	+			2	0												
		3	0	2	0												

2

3,721

 $= 3,646 + 75$

1 mark

		3	6	4	6												
	+			7	5												
		3	7	2	1												
			±	±													

3

$346 = 300 +$

40

 $+ 6$

1 mark

3 4 6 = 3 0 0 + ? ? + 6

(2)

3 4 6 = 3 0 0 + 6 + ? ?

↓ Calculate!

3 4 6 = 3 0 6 + ? ?

(3)

3 4 6 - 3 0 6 = ? ?

(4) Calculate!

(1) Rearrange!

$$\begin{array}{r} 300 \\ + 6 \\ \hline 306 \end{array}$$

Inverse!

$$\begin{array}{r} 346 \\ - 306 \\ \hline 40 \end{array}$$

4

508

$+ 9 = 517$

?	?	?	$+$	9	$=$	5	1	7	<div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">1</div> <div style="font-size: 12px;">Inverse!</div> <div style="font-size: 12px;">- 9</div>
?	?	?	$=$	5	1	7	$-$	9	

$$\begin{array}{r} 0 \\ 5 \cancel{1} 7 \\ - \quad \quad 9 \\ \hline 5 \ 0 \ 8 \end{array}$$

2

Calculate!

1 mark

5

$4 \times 75 =$

		7	5
\times		2	4
	3	0	0

300

1 mark

6

$3.23 + 4.398 =$

	3	.	2	3	0	<div style="font-size: 12px;">Add place holder!</div>
$+$	4	.	3	9	8	
	7	.	6	2	8	<div style="font-size: 12px;">Make sure decimal points are lined up!</div>
	1					

7.628

1 mark

7

$180 \div 2 =$

1 mark

$$\begin{array}{r} 90 \\ 2 \overline{)180} \end{array}$$

90

8

$140 \div 14 =$

1 mark

$$\begin{array}{r} 10 \\ 14 \overline{)140} \end{array}$$

10

9

$494 \times 0 =$

1 mark

$$\begin{array}{r} 494 \\ \times \quad 0 \\ \hline 0 \end{array}$$

Whenever you
multiply by "0" the
answer is always
"0"!

0

10

$52 \div 4 =$

1

1 mark

	1	3
4	5	2
-	4	
	1	2
-	1	2
		0

13

30	= 68 - 38
----	-----------

1

1 mark

	6	8
-	3	8
	3	0

401 -	7	= 394
-------	---	-------

1

1 mark

4	0	1	-	?	?	=	3	9	4
---	---	---	---	---	---	---	---	---	---

① Rearrange!

Rearrange!

4	0	1	-	3	9	4	=	?	?
---	---	---	---	---	---	---	---	---	---

	3	9	
	4	0	1
-	3	9	4
			7

Calculate!

13

$$1,430 \div 13 =$$

1 mark

				1	1	0
1	3	)	1	4	3	0
	-		1	3		
			1	3		
			-	1	3	
				0	0	
				-	0	
					0	

110

14

$$38.35 \times 10 =$$

①

Count the zeros!

1 mark

$$38.35 \times 10 =$$

②

$$38.35 \times 1 = 38.35 \text{ Calculate!}$$

③

Move the digits 1
place to the left!

$$383.5$$

383.5

15

$$40 \div (80 - 76) =$$

1 mark

$$40 \div (80 - 76) =$$

Calculate
brackets first!

$$40 \div 4 = 10$$

10

16

$4^3 =$

1 mark

$4 \times 4 \times 4 =$

$16 \times 4 = 64$

$$\begin{array}{r}
 16 \\
 \times 4 \\
 \hline
 64
 \end{array}$$

64

17

$305 \times 2,000 =$

1 mark

$305 \times 2000 =$ Count the zeros! ^①

$$\begin{array}{r}
 305 \\
 \times 2 \\
 \hline
 610
 \end{array}$$

Calculate! ^②
^③ Move digits 3 places to the left and add 3 place holders!

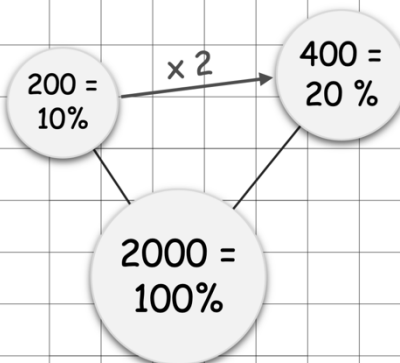
610000

610,000

18

$20\% \text{ of } 2,000 =$

1 mark



400

19

$$5 - 2.55 =$$



1 mark

$$\begin{array}{r} 4 9 \\ \cancel{5} \cancel{0}^1 0 \\ - 2.55 \\ \hline 2.45 \end{array}$$

→ Add decimal point and place holders!

→ Make sure decimal points are lined up!

2.45

20

$$0.3 \div 100 =$$



1 mark

$$0.3 \div 100 =$$

①

Count the zeros!

$$0.3 \div 1 = 0.3$$

②

Calculate!

③

Move digits 2 places
to the right!

0.003

0.003

21

$$5 - 2.5 =$$



1 mark

$$\begin{array}{r} 4 \\ \cancel{5} \cancel{0}^1 \\ - 2.5 \\ \hline 2.5 \end{array}$$

→ Add decimal point and place holder!

→ Make sure decimal points are lined up!

2.5

22

$5 \frac{2}{5} - \frac{4}{5} =$

1 mark

① Change to an improper fraction: $5 \frac{2}{5} = \frac{27}{5}$

② $\frac{27}{5} - \frac{4}{5} = \frac{23}{5} = 4 \frac{3}{5}$

$4 \frac{3}{5}$

23

			9	3	3
x	1	1	1	3	5
		4	6	6	5
	2	7	9	9	0
	3	2	6	5	5
	1	1	1		

2 mark

← Add a place holder

Show your method

$32,655$

24

$\frac{1}{3} + \frac{3}{4} =$

1 mark

① $\frac{1}{3} + \frac{3}{4} =$

L C M = 12

② $\frac{1}{3} \times \frac{4}{4} = \frac{4}{12}$ $\frac{3}{4} \times \frac{3}{3} = \frac{9}{12}$

③ Calculate! $\frac{4}{12} + \frac{9}{12} = \frac{13}{12} = 1 \frac{1}{12}$

$1 \frac{1}{12}$

25	$\begin{array}{r} 13 \\ 74 \overline{)962} \\ \underline{-74} \\ 222 \\ \underline{-222} \\ 0 \end{array}$																				<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> 2 marks
	$\begin{array}{l} 74 \times 1 = 74 \\ 74 \times 2 = 148 \\ 74 \times 3 = 222 \end{array}$																				
Show your method	<div style="border: 1px solid black; width: 150px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">13</div>																				

26	$1\frac{2}{3} + 2\frac{1}{2} = \overset{(2)}{\frac{2}{3} \xrightarrow{\times 2} \frac{4}{6} \xleftarrow{\times 2}} + \frac{1}{2} \xrightarrow{\times 3} \frac{3}{6} \xleftarrow{\times 3}}$																				<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> 1 mark
	$\overset{(1)}{1\frac{2}{3}} + 2\frac{1}{2} = \quad \quad \quad 1\frac{4}{6} + 2\frac{3}{6} =$																				
	$\text{LCM} = 6 \quad \quad \quad 1 + \frac{4}{6} + 2 + \frac{3}{6} =$																				
	$\overset{(4)}{1 + 2 + \frac{4}{6} + \frac{3}{6} = 3\frac{7}{6}}$																				
	$3 + 1 + \frac{1}{6} = 4\frac{1}{6}$																				
<div style="border: 1px solid black; width: 150px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">4 $\frac{1}{6}$</div>																					

27	55% of 640 =																				<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> 1 mark
	$320 = 50\% \xrightarrow{\div 10} 32 = 5\%$																				
$640 = 100\%$																					
<div style="border: 1px solid black; width: 150px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">352</div>																					

$$\frac{6}{9} - \frac{1}{6} =$$

$\frac{6}{9} - \frac{1}{6} =$
 1 $L \quad C \quad M = 1 \quad 8$
 $\frac{6}{9} \xrightarrow{\times 2} \frac{12}{18}$ $\frac{1}{6} \xrightarrow{\times 3} \frac{3}{18}$
 3 Calculate!
 $\frac{12}{18} - \frac{3}{18} = \frac{9}{18} = \frac{1}{2}$

54% of 800 =

Diagram illustrating the calculation of 432 as the sum of 400, 32, and 8:

- Top row: 4 0 0 + 3 2 = 4 3 2
- Left column (circles):
 - 8 = 1%
 - 400 = 50%
 - 800 = 100%
 - 32 = 4%
- Right column (box): 432
- Arrows indicate the addition: 400 + 32 + 8 = 432.

			1	7	3	4
x			1	7	2	
			5	3	4	6 8
	1	2	1	3	8	0
	1	2	4	8	4	8
			1			

10

Show
your
method

Add a place holder				
--------------------	--	--	--	--

124,848

31

$$\frac{2}{5} \div 6 =$$

1 mark

$$\frac{2}{5} \div 6 =$$

$$\frac{2}{5} \div \frac{6}{1} = \text{Multiply by reciprocal!}$$

$$\frac{2}{5} \times \frac{1}{6} = \frac{2}{30} = \frac{1}{15}$$

$$\frac{1}{15}$$

32

$$3 \frac{2}{3} - \frac{4}{6} =$$

①

Change to an improper fraction: $3 \frac{2}{3} = \frac{11}{3}$

1 mark

②

$$\frac{11}{3} - \frac{4}{6} =$$

④

$$\frac{22}{6} - \frac{4}{6} = \frac{18}{6} = 3$$

③

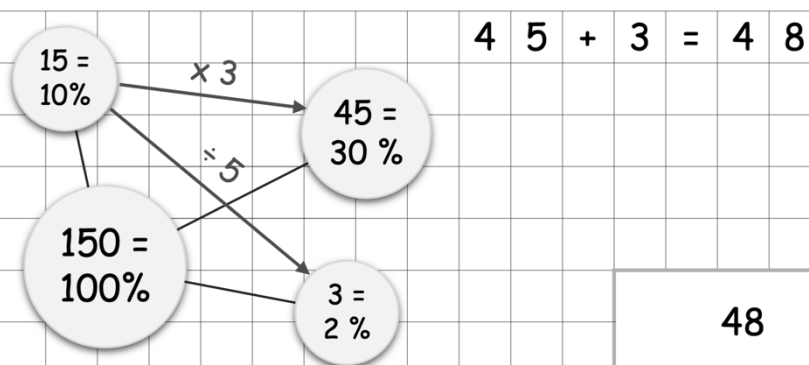
$$\frac{11}{3} \xrightarrow{\times 2} \frac{22}{6}$$

$$3$$

33

$$32\% \text{ of } 150 =$$

1 mark



$$48$$

34

① $4 \frac{3}{7} \times 30 =$

Change to improper fractions:
 $4 \frac{3}{7} = \frac{31}{7}$ & $30 = \frac{30}{1}$

② $\frac{31}{7} \times \frac{30}{1} = \frac{930}{7} = 132 \frac{6}{7}$

③

		3	0
x		3	1
<hr/>			
		3	0
	9	0	0
	9	3	0

④

7	)	9	3	0
		-7		
		2	3	
		-2	1	
			2	0
			-1	4
				6

1 mark

132 $\frac{6}{7}$

35

$\frac{3}{4} \times 340 =$

$\frac{3}{4} \times \frac{340}{1} = \frac{1020}{4} = 255$

x

		3	4	0
		1		3
<hr/>				
	1	0	2	0

4) 1020

		2	5	5	
4	)	1	0	2	0
		-8			
		2	2		
		-2	0		
			2	0	
			-2	0	
				0	

1 mark

255

36

8 1 x 1 = 8 1

8 1 x 2 = 1 6 2

8 1 x 3 = 2 4 3

8 1 x 4 = 3 2 4

8 1 x 5 = 4 0 5

8 1 x 6 = 4 8 6

8 1 x 7 = 5 6 7

8 1 x 8 = 6 4 8

8 1 x 9 = 7 2 9

2 marks

Show your method

8	1)	7	5	3	3
		-	7	2	9	
			2	4	3	
			-	2	4	3
					0	

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