

# **Grade 5 – Book B**

(Teacher's Guide)

**(CAPS edition)**

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This book was compiled and adapted in 2013 by E. Language in collaboration with EJ du Toit.

Contact number: 086 618 3709 (fax)

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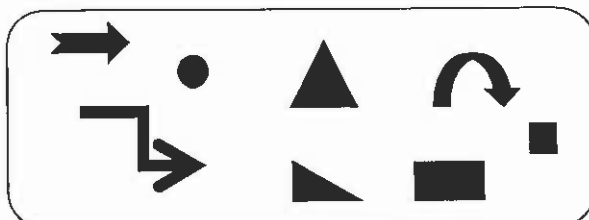
## Chapter B1

### Fractions

**Exercise 1:**

Date: \_\_\_\_\_

(1) Answer the questions.



- |  |               |
|--|---------------|
| (a) How many elements are there in the box?                    | 8             |
| (b) How many elements are arrows?                              | 3             |
| (c) What fraction of the elements is arrows?                   | $\frac{3}{8}$ |
| (d) What fraction of the elements is not arrows?               | $\frac{5}{8}$ |
| (e) What fraction is quadrilaterals?                           | $\frac{2}{8}$ |
| (f) What fraction is not quadrilaterals?                       | $\frac{6}{8}$ |
| (g) What fraction is triangles?                                | $\frac{2}{8}$ |
| (h) What fraction is not triangles?                            | $\frac{6}{8}$ |
| (i) What fraction of the elements is circles?                  | $\frac{1}{8}$ |
| (j) What fraction of the elements is not circles or triangles? | $\frac{6}{8}$ |

(2) What fraction is shaded and what fraction is not shaded?

		FRACTION SHADED	FRACTION NOT SHADED
(a)		$\frac{2}{3}$	$\frac{1}{3}$
(b)		$\frac{3}{4}$	$\frac{1}{4}$
(c)		$\frac{3}{6}$	$\frac{3}{6}$
(d)		$\frac{12}{4}$	$\frac{0}{4}$



Use the table to compare the fractions.

1 whole							
$\frac{1}{2}$				$\frac{1}{2}$			
$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

(3) Complete:  $>$ ;  $<$  or  $=$

(a)  $\frac{4}{4} > \frac{1}{2}$

(b)  $\frac{1}{8} < \frac{1}{4}$

(c)  $\frac{2}{4} = \frac{1}{2}$

(d)  $\frac{4}{4} = \frac{2}{2}$

(f)  $\frac{3}{8} < \frac{2}{4}$

(f)  $\frac{1}{8} < \frac{1}{2}$

(g)  $\frac{6}{8} = \frac{3}{4}$

(h)  $\frac{1}{1} = \frac{4}{4}$

(i)  $\frac{8}{8} = \frac{2}{2}$

(j)  $\frac{1}{4} < \frac{3}{8}$

(k)  $\frac{1}{2} < \frac{3}{4}$

(l)  $\frac{4}{4} > \frac{4}{8}$

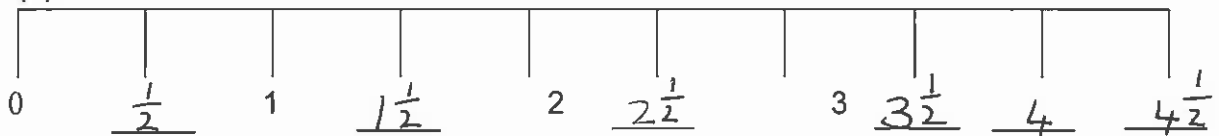
(m)  $\frac{5}{8} > \frac{1}{2}$

(n)  $\frac{1}{1} = \frac{8}{8}$

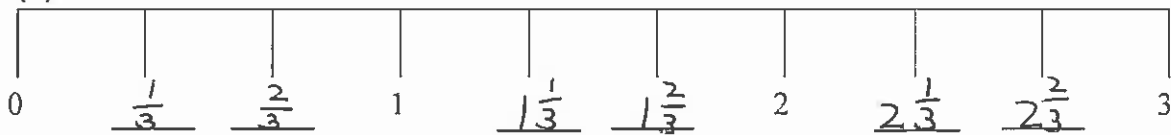
(o)  $\frac{4}{8} = \frac{1}{2}$

(4) Complete the number lines.

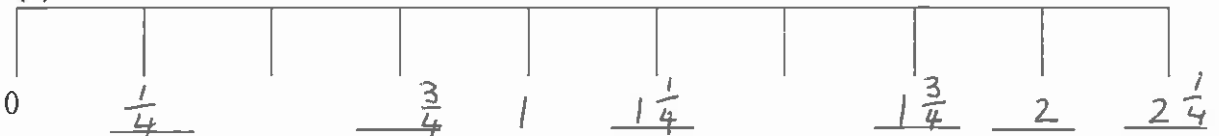
(a)



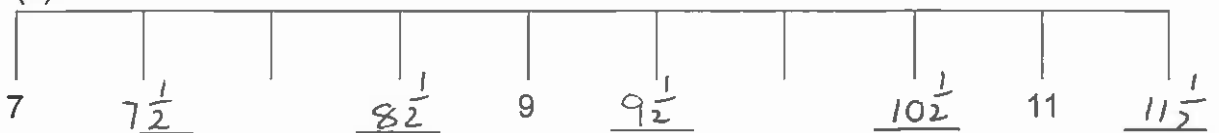
(b)



(c)



(d)



## MULTIPLICATION AND DIVISION (Speed test)

Exercise B1B:

Date: \_\_\_\_\_

6 x to 7 x

Write down only the answer.

$3 \times 7 = \underline{21}$

$18 \div 6 = \underline{3}$

$7 \times 6 = \underline{42}$

$11 \times 7 = \underline{77}$

$63 \div 7 = \underline{9}$

$6 \times 7 = \underline{42}$

$49 \div 7 = \underline{7}$

$28 \div 7 = \underline{4}$

$7 \times 7 = \underline{49}$

$84 \div 7 = \underline{12}$

$12 \times 6 = \underline{72}$

$6 \times 7 = \underline{42}$

$24 \div 6 = \underline{4}$

$12 \times 7 = \underline{84}$

$48 \div 6 = \underline{8}$

$60 \div 6 = \underline{10}$

$8 \times 7 = \underline{56}$

$54 \div 6 = \underline{9}$

$9 \times 7 = \underline{63}$

$6 \times 6 = \underline{36}$

$48 \div 6 = \underline{8}$

$5 \times 7 = \underline{35}$

$16 \div 0 = \underline{\text{undef.}}$

$77 \div 7 = \underline{11}$

$0 \times 6 = \underline{0}$

$7 \div 7 = \underline{1}$

$6 \times 6 = \underline{36}$

$35 \div 7 = \underline{5}$

$72 \div 6 = \underline{12}$

$5 \times 7 = \underline{35}$

$84 \div 7 = \underline{12}$

$9 \times 6 = \underline{54}$

$3 \times 6 = \underline{18}$

$36 \div 6 = \underline{6}$

$7 \times 7 = \underline{49}$

$30 \div 6 = \underline{5}$

$12 \times 7 = \underline{84}$

$9 \times 7 = \underline{63}$

$49 \div 7 = \underline{7}$

$72 \div 6 = \underline{12}$

Total: Total: Total: Total: 

Total out of 40:

 $16 \div 0 = \text{undefined}$ You can not divide by 0

PROPER FRACTION	IMPROPER FRACTION	MIXED NUMBER
$\frac{3}{4}$	$\frac{5}{4}$	$1\frac{1}{4}$
The fraction is <i>less</i> than 1 whole. The numerator is therefore less than the denominator.	The fraction is <i>greater</i> than 1 whole. The numerator is therefore greater than the denominator.	The fraction is <i>greater</i> than 1 whole.

**Exercise 2:**

Date: \_\_\_\_\_

(1) Classify the fractions as proper fractions, improper fractions or mixed numbers.

$\frac{1}{3}$

$\frac{4}{3}$

$\frac{1}{5}$

$1\frac{1}{5}$

proper  
fractionimproper  
fractionproper  
fractionmixed  
number

(2) Circle all the fractions that are greater than 1 whole.

$\frac{7}{8}$

$\frac{4}{5}$

$\frac{3}{8}$

$\frac{7}{6}$

$\frac{2}{3}$


$\frac{4}{1}$


$\frac{8}{8}$

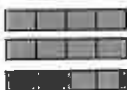
$\frac{7}{5}$

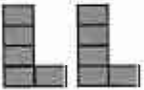
$1\frac{7}{8}$

(3) How many wholes are there in each of the following?

(a)   $\frac{6}{3} = \underline{2}$

(b)   $\frac{9}{3} = \underline{3}$

(c)   $\frac{12}{4} = \underline{3}$

(d)   $\frac{10}{5} = \underline{2}$

(e) ?  $\frac{8}{2} = \underline{4}$

(f) ?  $\frac{16}{4} = \underline{4}$

(g) ?  $\frac{20}{2} = \underline{10}$

(h) ?  $\frac{36}{4} = \underline{9}$


(i) ?  $\frac{12}{4} = \underline{3}$

(j) ?  $\frac{18}{2} = \underline{9}$

(4) What fraction is shaded in each case? Write this as a mixed number as well.

(a)   $\rightarrow \frac{7}{4} = 1\frac{3}{4}$

(b)   $\rightarrow \frac{17}{5} = 3\frac{2}{5}$

(c)   $\rightarrow \frac{10}{3} = 3\frac{1}{3}$

(d)   $\rightarrow \frac{21}{6} = 3\frac{3}{6}$

(e)   $\rightarrow \frac{7}{3} = 2\frac{1}{3}$

(f)   $\rightarrow \frac{19}{6} = 3\frac{1}{6}$





1 WHOLE											
$\frac{1}{2}$						$\frac{1}{2}$					
$\frac{1}{3}$				$\frac{1}{3}$				$\frac{1}{3}$			
$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$	
$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$

**Exercise 3:**

Date: \_\_\_\_\_

(1) Complete with equivalent fractions (this refers to fractions that have the same value):

$$1 = \frac{2}{2} = \frac{3}{3} = \frac{6}{6} = \frac{12}{12}$$

(2) Study the diagram at the top of the page and answer the questions.

(a)  $\frac{2}{6} = \underline{1}$  third

(c)  $\frac{2}{3} = \underline{4}$  sixths

(e)  $\frac{3}{6} = \underline{1}$  halve

(g)  $\frac{1}{2} = \underline{6}$  twelfths

(i)  $\frac{1}{2} = \underline{3}$  sixths

(k)  $\frac{3}{3} = \underline{1}$  whole

(m)  $\frac{12}{12} = \underline{6}$  sixths

\*(o)  $\frac{9}{3} = \underline{3}$  wholes

\*(q)  $\frac{12}{3} = \underline{4}$  wholes

\*(s)  $\frac{36}{12} = \underline{3}$  wholes

(b)  $\frac{6}{6} = \underline{1}$  whole

(d)  $\frac{4}{12} = \underline{1}$  third

(f)  $\frac{8}{12} = \underline{4}$  sixths

(h)  $\frac{1}{3} = \underline{4}$  twelfths

(j)  $\frac{4}{6} = \underline{8}$  twelfths

(l)  $\frac{1}{1} = \underline{3}$  thirds

\*(n)  $\frac{4}{2} = \underline{2}$  wholes

\*(p)  $\frac{24}{12} = \underline{2}$  wholes

\*(r)  $\frac{18}{3} = \underline{6}$  wholes

\*(t)  $\frac{24}{6} = \underline{4}$  wholes

(3) Complete with the correct numbers to give wholes.

(a)  $\frac{10}{2} = 5$

(b)  $\frac{6}{3} = 2$

(c)  $\frac{9}{3} = 3$

(d)  $\frac{8}{4} = 2$

(e)  $\frac{16}{4} = 4$

(f)  $\frac{10}{2} = 5$

(g)  $\frac{10}{5} = 2$

(h)  $\frac{24}{4} = 6$

(i)  $\frac{15}{5} = 3$



## Mixed numbers and improper fractions

**Exercise 4:**

Date: \_\_\_\_\_




(1) How many wholes are there in each case, and how much of the fraction remains?

(a)	$\frac{9}{5}$	=	$\frac{5}{5} + \frac{4}{5}$	=	1 whole	and	4	fifths
(b)	$\frac{11}{6}$	=	$\frac{6}{6} + \frac{5}{6}$	=	1 whole	and	5	sixths
(c)	$\frac{9}{7}$	=	$\frac{7}{7} + \frac{2}{7}$	=	1 whole	and	2	sevenths
(d)	$\frac{15}{6}$	=	$\frac{6}{6} + \frac{3}{6}$	=	1 whole	and	3	sixths
*(e)	$\frac{7}{3}$	=	$\frac{3}{3} + \frac{3}{3} + \frac{1}{3}$	=	2 wholes	and	1	thirds
*(f)	$\frac{19}{7}$	=	$\frac{7}{7} + \frac{7}{7} + \frac{5}{7}$	=	2 wholes	and	5	sevenths
(g)	$\frac{9}{6}$	=	$\frac{6}{6} + \frac{3}{6}$	=	1 whole	and	3	sixths
(h)	$\frac{6}{5}$	=	$\frac{5}{5} + \frac{1}{5}$	=	1 whole	and	1	fifths

(2) Now write it the other way round.

(a)	$1\frac{3}{5}$	=	$\frac{5}{5} + \frac{3}{5}$	=	$\frac{8}{5}$
(b)	$2\frac{2}{3}$	=	$\frac{3}{3} + \frac{3}{3} + \frac{2}{3}$	=	$\frac{8}{3}$
(c)	$1\frac{3}{7}$	=	$\frac{7}{7} + \frac{3}{7}$	=	$\frac{10}{7}$
(d)	$1\frac{5}{6}$	=	$\frac{6}{6} + \frac{5}{6}$	=	$\frac{11}{6}$
(e)	$2\frac{1}{3}$	=	$\frac{3}{3} + \frac{3}{3} + \frac{1}{3}$	=	$\frac{7}{3}$
(f)	$2\frac{1}{7}$	=	$\frac{7}{7} + \frac{7}{7} + \frac{1}{7}$	=	$\frac{15}{7}$
(g)	$2\frac{2}{4}$	=	$\frac{4}{4} + \frac{4}{4} + \frac{2}{4}$	=	$\frac{10}{4}$

(3) Write sums to fit the following drawings.

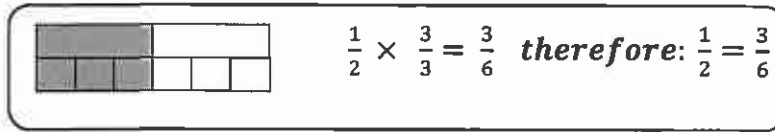
	Number shaded					Improper fraction
(a)		=	<u>1</u>	whole:	<u>3</u>	quarters or $\frac{7}{4}$
(b)		=	<u>2</u>	wholes	<u>1</u>	halve or $\frac{5}{2}$
(c)		=	<u>3</u>	wholes	<u>1</u>	third or $\frac{10}{3}$



## Equivalent fractions (this refers to fractions that have the same value)

### Exercise 5:

Date: \_\_\_\_\_



(1) Write down equivalent fractions. **GOLDEN RULE:** What you do to the top, you must do to the bottom.

(a)  $\frac{1}{2} \times \frac{3}{3} = \frac{3}{6}$

(b)  $\frac{1}{3} \times \frac{2}{2} = \frac{2}{6}$

(c)  $\frac{1}{3} \times \frac{3}{3} = \frac{3}{9}$

(d)  $\frac{2}{5} \times \frac{2}{2} = \frac{4}{10}$

(e)  $\frac{3}{4} \times \frac{3}{3} = \frac{9}{12}$

(f)  $\frac{3}{4} \times \frac{5}{5} = \frac{15}{20}$

(g)  $\frac{3}{6} \times \frac{2}{2} = \frac{6}{12}$

(h)  $\frac{5}{8} \times \frac{2}{2} = \frac{10}{16}$

(i)  $\frac{1}{9} \times \frac{2}{2} = \frac{2}{18}$

(j)  $\frac{4}{7} \times \frac{2}{2} = \frac{8}{14}$

(k)  $\frac{3}{6} \times \frac{2}{2} = \frac{6}{12}$

(l)  $\frac{2}{3} \times \frac{5}{5} = \frac{10}{15}$

(m)  $\frac{4}{9} \times \frac{10}{10} = \frac{40}{90}$

(n)  $\frac{2}{9} \times \frac{9}{9} = \frac{18}{81}$

(o)  $\frac{1}{5} \times \frac{14}{14} = \frac{14}{70}$

(2) Supply the correct numbers to make each statement true.

(a)  $\frac{1}{2} = \frac{3}{6}$

(b)  $\frac{1}{2} = \frac{2}{4}$

(c)  $\frac{1}{2} = \frac{4}{8}$

(d)  $\frac{1}{2} = \frac{5}{10}$

(e)  $\frac{1}{4} = \frac{2}{8}$

(f)  $\frac{1}{4} = \frac{3}{12}$

(g)  $\frac{1}{4} = \frac{5}{20}$

(h)  $\frac{1}{4} = \frac{4}{16}$

(i)  $\frac{1}{3} = \frac{2}{6}$

(j)  $\frac{1}{3} = \frac{4}{12}$

(k)  $\frac{1}{3} = \frac{6}{18}$

(l)  $\frac{1}{3} = \frac{7}{21}$

(m)  $\frac{1}{5} = \frac{2}{10}$

(n)  $\frac{1}{5} = \frac{8}{40}$

(o)  $\frac{1}{5} = \frac{4}{20}$

(p)  $\frac{1}{5} = \frac{6}{30}$

(q)  $\frac{2}{6} = \frac{4}{12}$

(r)  $\frac{4}{5} = \frac{12}{15}$

(s)  $\frac{2}{3} = \frac{20}{30}$

(t)  $\frac{4}{6} = \frac{16}{24}$

(u)  $\frac{3}{4} = \frac{18}{24}$

(v)  $\frac{4}{8} = \frac{16}{32}$

(w)  $\frac{5}{7} = \frac{25}{35}$

(x)  $\frac{4}{6} = \frac{24}{36}$

## MULTIPLICATION AND DIVISION (Speed test)

Exercise B1F:

Date: \_\_\_\_\_

9 x to 12 x

Write down only the answer.

$6 \times 9 = \underline{54}$

$45 \div 9 = \underline{5}$

$3 \times 9 = \underline{27}$

$11 \times 90 = \underline{990}$

$81 \div 9 = \underline{9}$

$6 \times 9 = \underline{54}$

$36 \div 12 = \underline{3}$

$480 \div 12 = \underline{40}$

$7 \times 9 = \underline{63}$

$48 \div 12 = \underline{4}$

$12 \times 12 = \underline{144}$

$6 \times 120 = \underline{720}$

$36 \div 9 = \underline{4}$

$12 \times 12 = \underline{144}$

$96 \div 12 = \underline{8}$

$360 \div 3 = \underline{120}$

$7 \times 12 = \underline{84}$

$54 \div 9 = \underline{6}$

$8 \times 9 = \underline{72}$

$11 \times 12 = \underline{121}$

$45 \div 9 = \underline{5}$

$60 \div 12 = \underline{5}$

$36 \div 2 = \underline{18}$

$840 \div 12 = \underline{70}$

$0 \times 11 = \underline{0}$

$132 \div 11 = \underline{12}$

$6 \times 2 = \underline{12}$

$*450 \div 50 = \underline{9}$

$36 \div 12 = \underline{3}$

$5 \times 12 = \underline{60}$

$72 \div 6 = \underline{12}$

$*120 \times 9 = \underline{1080}$

$11 \times 11 = \underline{121}$

$108 \div 9 = \underline{12}$

$7 \times 9 = \underline{63}$

$*720 \div 90 = \underline{8}$

$8 \times 12 = \underline{96}$

$8 \times 9 = \underline{72}$

$18 \div 0 = \underline{\text{undef.}}$

$*1\ 080 \div 90 = \underline{12}$

Total: Total: Total: Total: Total out of 40: 


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## More equivalent fractions (simplify)

**Exercise 6:**

Date: \_\_\_\_\_



$$\frac{6}{12} \div \frac{2}{2} = \frac{1}{2} \quad \text{therefore: } \frac{3}{6} = \frac{1}{2}$$

(1) Write down equivalent fractions. **GOLDEN RULE:** What you do to the top, you must do to the bottom.

<p>(a) <math>\frac{6}{12} \div \frac{2}{2} = \frac{1}{2}</math></p>	<p>(b) <math>\frac{9}{12} \div \frac{3}{3} = \frac{3}{4}</math></p>	<p>(c) <math>\frac{4}{8} \div \frac{4}{4} = \frac{1}{2}</math></p>
<p>(d) <math>\frac{6}{8} \div \frac{2}{2} = \frac{3}{4}</math></p>	<p>(e) <math>\frac{12}{15} \div \frac{3}{3} = \frac{4}{5}</math></p>	<p>(f) <math>\frac{5}{10} \div \frac{5}{5} = \frac{1}{2}</math></p>
<p>(g) <math>\frac{7}{14} \div \frac{7}{7} = \frac{1}{2}</math></p>	<p>(h) <math>\frac{8}{16} \div \frac{8}{8} = \frac{1}{2}</math></p>	<p>(i) <math>\frac{9}{18} \div \frac{9}{9} = \frac{1}{2}</math></p>
<p>(j) <math>\frac{18}{21} \div \frac{3}{3} = \frac{6}{7}</math></p>	<p>(k) <math>\frac{12}{24} \div \frac{12}{12} = \frac{1}{2}</math></p>	<p>(l) <math>\frac{24}{30} \div \frac{6}{6} = \frac{4}{5}</math></p>
<p>(m) <math>\frac{20}{30} \div \frac{10}{10} = \frac{2}{3}</math></p>	<p>(n) <math>\frac{9}{27} \div \frac{9}{9} = \frac{1}{3}</math></p>	<p>(o) <math>\frac{15}{20} \div \frac{5}{5} = \frac{3}{4}</math></p>

(2) Supply the correct numbers to make each statement true.

<p>(a) <math>\frac{3}{6} = \frac{1}{2}</math></p>	<p>(b) <math>\frac{6}{12} = \frac{1}{2}</math></p>	<p>(c) <math>\frac{10}{20} = \frac{1}{2}</math></p>	<p>(d) <math>\frac{9}{18} = \frac{1}{2}</math></p>
<p>(e) <math>\frac{3}{12} = \frac{1}{4}</math></p>	<p>(f) <math>\frac{5}{20} = \frac{1}{4}</math></p>	<p>(g) <math>\frac{4}{16} = \frac{1}{4}</math></p>	<p>(h) <math>\frac{6}{24} = \frac{1}{4}</math></p>
<p>(i) <math>\frac{4}{12} = \frac{1}{3}</math></p>	<p>(j) <math>\frac{5}{15} = \frac{1}{3}</math></p>	<p>(k) <math>\frac{2}{6} = \frac{1}{3}</math></p>	<p>(l) <math>\frac{3}{9} = \frac{1}{3}</math></p>

(3) How many wholes are there?

<p>(a) <math>\frac{12}{6} = \underline{2}</math></p>	<p>(b) <math>\frac{14}{7} = \underline{2}</math></p>	<p>(c) <math>\frac{21}{3} = \underline{7}</math></p>
<p>(d) <math>\frac{18}{6} = \underline{3}</math></p>	<p>(e) <math>\frac{24}{6} = \underline{4}</math></p>	<p>(f) <math>\frac{30}{6} = \underline{5}</math></p>
<p>(g) <math>\frac{16}{4} = \underline{4}</math></p>	<p>(h) <math>\frac{20}{5} = \underline{4}</math></p>	<p>(i) <math>\frac{28}{4} = \underline{7}</math></p>

## MULTIPLICATION AND DIVISION (Speed test)

Exercise B1G:

Date: \_\_\_\_\_

BODMAS

Write down only the answer.

$6 \times 6 + 4 = \underline{40}$

$50 - 45 \div 5 = \underline{41}$

$35 + 5 \times 7 = \underline{70}$

$5 + 81 \div 9 = \underline{14}$

$90 - 5 \times 9 = \underline{45}$

$9 + 48 \div 8 = \underline{15}$

$70 - 7 \times 9 = \underline{7}$

$70 - 7 \times 5 = \underline{35}$

$7 + 12 \times 12 = \underline{151}$

$100 - 25 \times 2 = \underline{50}$

$150 - 12 \times 12 = \underline{6}$

$8 + 56 \div 8 = \underline{15}$

$24 - 2 \times 12 = \underline{0}$

$120 - 20 \times 3 = \underline{60}$

$80 - 8 \times 5 = \underline{40}$

$40 - 45 \div 9 = \underline{35}$

$100 - 5 \times 5 = \underline{75}$

$75 - 24 \div 8 = \underline{72}$

$12 - 0 \times 11 = \underline{12}$

$20 - 81 \div 9 = \underline{11}$

$65 - 4 \times 9 = \underline{29}$

$18 - 36 \div 3 = \underline{6}$

$80 - 8 \times 8 = \underline{16}$

$15 + 72 \div 6 = \underline{27}$

$50 - 6 \times 5 = \underline{20}$

$40 + 64 \div 8 = \underline{48}$

$4 + 7 \times 9 = \underline{67}$

$40 - 7 \times 5 = \underline{5}$

$25 + 8 \times 8 = \underline{89}$

$18 + 64 \div 8 = \underline{26}$

Total: Total: Total: 

Total out of 30:

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## Adding fractions

### Exercise 7:

Date: \_\_\_\_\_

(1) Complete the pattern.

(a)

$$4 \rightarrow +\frac{1}{2} \rightarrow \boxed{4\frac{1}{2}} \rightarrow +\frac{1}{2} \rightarrow \boxed{5} \rightarrow +\frac{1}{2} \rightarrow \boxed{5\frac{1}{2}}$$

(b)

$$6 \rightarrow +\frac{1}{2} \rightarrow \boxed{6\frac{1}{2}} \rightarrow +\frac{1}{2} \rightarrow \boxed{7} \rightarrow +\frac{1}{2} \rightarrow \boxed{7\frac{1}{2}}$$

$$\boxed{9} \leftarrow +\frac{1}{2} \leftarrow \boxed{8\frac{1}{2}} \leftarrow +\frac{1}{2} \leftarrow \boxed{8} \leftarrow +\frac{1}{2}$$

↓  
+

(c)

$$3 \rightarrow +\frac{1}{4} \rightarrow \boxed{3\frac{1}{4}} \rightarrow +\frac{1}{4} \rightarrow \boxed{3\frac{2}{4}} \rightarrow +\frac{1}{4} \rightarrow \boxed{3\frac{3}{4}}$$

$$\boxed{4\frac{2}{4}} \leftarrow +\frac{1}{4} \leftarrow \boxed{4\frac{1}{4}} \leftarrow +\frac{1}{4} \leftarrow \boxed{4} \leftarrow +\frac{1}{4}$$

↓  
+

(2) Add the fractions.

<p>(a) <math>\frac{1}{4} + \frac{1}{4} = \frac{2}{4} \text{ or } \frac{1}{2}</math></p>	<p>(b) <math>\frac{1}{5} + \frac{3}{5} = \frac{4}{5}</math></p>	<p>(c) <math>\frac{1}{3} + \frac{2}{3} = \frac{3}{3} \text{ or } 1</math></p>
<p>(d) <math>\frac{1}{4} + \frac{3}{4} = \frac{4}{4} \text{ or } 1</math></p>	<p>(e) <math>\frac{2}{5} + \frac{2}{5} = \frac{4}{5}</math></p>	<p>(f) <math>\frac{3}{6} + \frac{1}{6} = \frac{4}{6} \text{ or } \frac{2}{3}</math></p>
<p>(g) <math>\frac{2}{7} + \frac{3}{7} = \frac{5}{7}</math></p>	<p>(h) <math>\frac{5}{10} + \frac{1}{10} = \frac{6}{10} \text{ or } \frac{3}{5}</math></p>	<p>(i) <math>\frac{4}{8} + \frac{2}{8} = \frac{6}{8} \text{ or } \frac{3}{4}</math></p>
<p>(j) <math>\frac{3}{9} + \frac{6}{9} = \frac{9}{9} \text{ or } 1</math></p>	<p>(k) <math>\frac{4}{5} + \frac{1}{5} = \frac{5}{5} \text{ or } 1</math></p>	<p>(l) <math>\frac{2}{2} + \frac{1}{1} = 2</math></p>
<p>(m) <math>\frac{5}{4} + \frac{2}{4} = \frac{7}{4} \text{ or } 1\frac{3}{4}</math></p>	<p>(n) <math>\frac{3}{8} + \frac{4}{8} = \frac{7}{8}</math></p>	<p>(o) <math>\frac{3}{4} + \frac{4}{4} = 1\frac{3}{4} \text{ or } 1\frac{3}{4}</math></p>



MORE DIFFICULT ADDITION AND SIMPLIFICATION**Exercise 8:**

Date: \_\_\_\_\_

(1) Add the fractions and simplify the answer.

(a) $\frac{3}{16} + \frac{5}{16} = \frac{8}{16} \div \frac{8}{8} = \frac{1}{2}$	(b) $\frac{4}{15} + \frac{8}{15} = \frac{12}{15} \div \frac{3}{3} = \frac{4}{5}$
(c) $\frac{2}{8} + \frac{2}{8} = \frac{4}{8} \div \frac{4}{4} = \frac{1}{2}$	(d) $\frac{12}{20} + \frac{3}{20} = \frac{15}{20} \div \frac{5}{5} = \frac{3}{4}$
(e) $\frac{11}{18} + \frac{1}{18} = \frac{12}{18} \div \frac{6}{6} = \frac{2}{3}$	(f) $\frac{24}{50} + \frac{6}{50} = \frac{30}{50} \div \frac{10}{10} = \frac{3}{5}$
(g) $\frac{15}{30} + \frac{5}{30} = \frac{20}{30} \div \frac{10}{10} = \frac{2}{3}$	(h) $\frac{6}{12} + \frac{2}{12} = \frac{8}{12} \div \frac{4}{4} = \frac{2}{3}$
(i) $\frac{25}{100} + \frac{35}{100} = \frac{60}{100} \div \frac{20}{20} = \frac{3}{5}$	(j) $\frac{15}{25} + \frac{5}{25} = \frac{20}{25} \div \frac{5}{5} = \frac{4}{5}$

(2) What fraction has to be added in each case?

(a) $\frac{3}{8} + \frac{4}{8} = \frac{7}{8}$	(b) $\frac{3}{6} + \frac{3}{6} = \frac{6}{6}$	(c) $\frac{2}{10} + \frac{6}{10} = \frac{8}{10}$
(d) $\frac{3}{15} + \frac{9}{15} = \frac{12}{15}$	(e) $\frac{2}{5} + \frac{3}{5} = 1$	(f) $\frac{2}{5} + \frac{8}{5} = 2$
(g) $\frac{2}{10} + \frac{7}{10} = \frac{9}{10}$	(h) $\frac{5}{8} + \frac{3}{8} = 1$	(i) $\frac{4}{6} + \frac{8}{6} = 2$
(j) $\frac{8}{20} + \frac{8}{20} = \frac{16}{20}$	(k) $\frac{4}{10} + \frac{6}{10} = 1$	(l) $\frac{1}{2} + \frac{3}{2} = 2$
(m) $\frac{7}{8} + \frac{1}{8} = 1$	(n) $\frac{4}{7} + \frac{2}{7} = \frac{6}{7}$	(o) $\frac{1}{5} + \frac{19}{5} = 4$

(3) Add the integers and the fractions.

(a) $1 + 1\frac{1}{3} = 2\frac{1}{3}$	(b) $1\frac{1}{4} + 1\frac{1}{4} = 2\frac{2}{4} = 2\frac{1}{2}$
(c) $4\frac{1}{5} + 1\frac{3}{5} = 5\frac{4}{5}$	(d) $4\frac{2}{6} + 1\frac{3}{6} = 5\frac{5}{6}$
(e) $4\frac{1}{3} + 1\frac{1}{3} = 5\frac{2}{3}$	(f) $1\frac{2}{8} + 1\frac{1}{8} = 2\frac{3}{8}$
(g) $2\frac{3}{8} + 1\frac{1}{8} = 3\frac{4}{8} = 3\frac{1}{2}$	(h) $1\frac{2}{6} + 1\frac{3}{6} = 2\frac{5}{6}$

