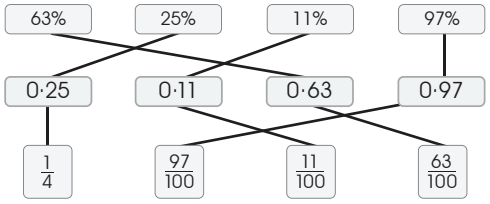
Answers to **6:NA01** to **6:NA:93** can be found in **6:NA00D** and **6:NA00E**, within the Level Contents of this section.

Answers to Level 6 Fractions and Decimals

6:01

1 **a** $\frac{43}{100}$, 0·43, 43% **b** $\frac{11}{100}$, 0·11, 11%

2



3 **a** $\frac{79}{100}$, $\frac{7}{10}$, $\frac{51}{100}$, $\frac{2}{10}$, $\frac{19}{100}$

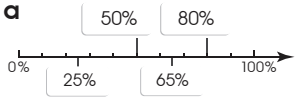
b 92%, 72%, 37%, 29%, 23%

c 0·82, 0·28, 0·22, 0·2, 0·02

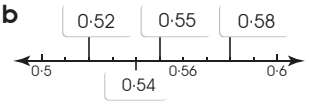
4 **a** 25% **b** 50% **c** 75% **d** 10% **e** 20%

5 **a** 26% **b** 70% **c** 83% **d** 66% **e** 1%

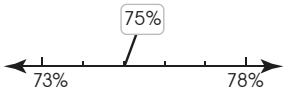
6 **a**



b



7 **a**



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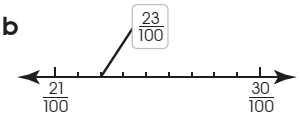
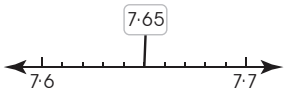


c

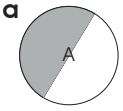


6:01 Consolidation B

1 **a** $\frac{10}{100}$ = 10% **b** $\frac{25}{100}$ = 25% **c** $\frac{50}{100}$ = 50% **d** $\frac{20}{100}$ = 20%

2 **a** $\frac{30}{100}$ = 30% **b** $\frac{70}{100}$ = 70% **c** $\frac{75}{100}$ = 75% **d** $\frac{40}{100}$ = 40%

3 **a**



b

c

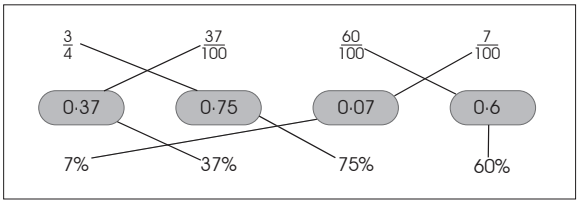
d

e 50% **f** 75% **g** 90% **h** 25%

4 **a** $\frac{1}{4}$ or 25% **b** $\frac{2}{5}$ or 40% **c** $\frac{8}{10}$ or 80% **d** $\frac{1}{2}$ or 50%

6:01 Extension

1 **a**



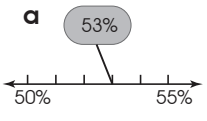
2 **a** 2% **b** 84% **c** 50% **d** 10%

3 **a** 49% **b** 72% **c** 8% **d** 70%

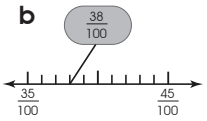
4 **a** $\frac{3}{100}$, $\frac{3}{10}$, $\frac{36}{100}$, $\frac{70}{100}$, $\frac{74}{100}$ **b** 8%, 18%, 78%, 80%, 81%

c 0·56, 0·6, 0·66, 0·85

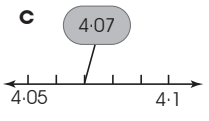
5 **a**



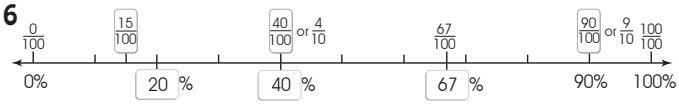
b



c



6



6:02

1 **a** 1, 2, 5 **b** 6, 4, 2 **c** 9, 6, 3

2 **a** 2, 2, 2 **b** 8, 4, $4\overline{)32}$ = 8

c 7, 9, $9\overline{)63}$ = 7 **d** 8, 8, $8\overline{)64}$ = 8

3 **a** 9 **b** 6 **c** 5 **d** 9

e 25 **f** 12 **g** 24 **h** 109

4 **a** 250 m **b** 20 cm **c** 15 min **d** 500 mL

5 **a** 24, 48 **f** 9, 18, 27 **g** 8, 16, 40

6:02 Extension

1 **a** 15 **b** 30 **c** 45 **d** $\frac{1}{6}$ (or $\frac{10}{60}$)

2 **a** 30° **b** 90° **c** 60° **d** 120°

3 **a** 500 mL **b** $\frac{1}{4}\times$ 1000 mL = 1000 mL ÷ 4 = 250 mL

c $\frac{3}{4}\times$ 1000 mL = 1000 mL ÷ 4 × 3 = 750 mL

Challenge:

a 5 **b** 18 **c** 250

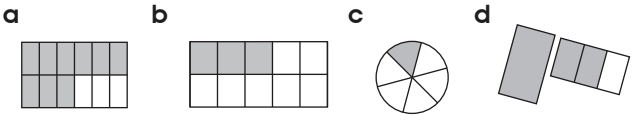
d 25 **e** 126 **f** 750

6:03

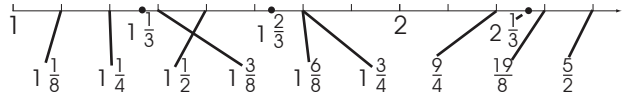
1 **a** $\frac{1}{3}$ **b** $\frac{3}{4}$ **c** $\frac{5}{12}$ **d** $\frac{5}{6}$ **e** $\frac{4}{10}$ (or $\frac{2}{5}$)

f $\frac{3}{8}$ **g** $\frac{4}{5}$

2 **a** **b** **c** **d**



3



c $2\frac{1}{4}$ **d** $2\frac{3}{8}$ **e** $2\frac{1}{2}$ **f** $2\frac{3}{4}$

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Answers to Level 6 Fractions and Decimals

4 **a** $\frac{4}{4} + \frac{1}{4} = \frac{5}{4}$ $\boxed{1 + \frac{1}{4} = 1\frac{1}{4}}$ **b** $\frac{5}{5} + \frac{1}{5} = \frac{5}{4}$ $\boxed{1 + \frac{1}{5} = 1\frac{1}{5}}$

c $\frac{8}{8} + \frac{8}{8} + \frac{8}{8} + \frac{1}{8} = \frac{25}{8}$ $\boxed{3 + \frac{1}{8} = 3\frac{1}{8}}$

5 **a** $\frac{6}{6} - \frac{1}{6} = \frac{5}{6}$ $\boxed{1 - \frac{1}{6} = \frac{5}{6}}$ **b** $\frac{6}{3} - \frac{1}{3} = \frac{5}{3}$ $\boxed{2 - \frac{1}{3} = 1\frac{2}{3}}$

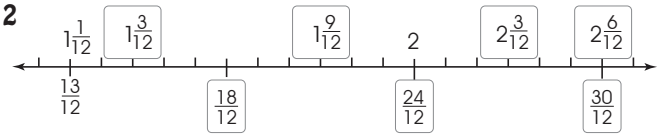
c $\frac{30}{10} - \frac{3}{10} = \frac{27}{10}$ $\boxed{3 - \frac{3}{10} = 2\frac{7}{10}}$

6:03 Extension

1 **a** $\frac{12}{4} + \frac{1}{4} = \frac{13}{4}$, $3 + \frac{1}{4} = 3\frac{1}{4}$

b $\frac{15}{3} + \frac{2}{3} = \frac{17}{3}$, $5 + \frac{2}{3} = 5\frac{2}{3}$

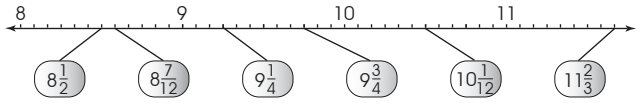
2



3 **a** $\frac{17}{12}$ **b** $\frac{18}{12}$ **c** $\frac{25}{12}$ **d** $\frac{31}{12}$ **e** $\frac{19}{12}$

4 **a** $1\frac{3}{12}$ **b** $\frac{11}{12}$ **c** $2\frac{9}{12}$ **d** $\frac{1}{6}$ **e** $1\frac{2}{3}$

5



6 **a** $5\frac{1}{3}$ **b** $5\frac{3}{4}$ **c** $13\frac{3}{5}$ **d** $13\frac{2}{6}$

6:04

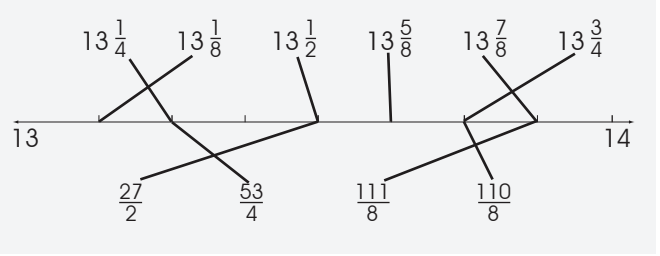
1 **a** $\frac{15}{4}$ **b** $\frac{15}{2}$ **c** $\frac{13}{6}$ **d** $\frac{101}{10}$ **e** $\frac{21}{5}$ **f** $\frac{17}{8}$ **g** $\frac{11}{3}$

2 **a** $5\frac{3}{6}$ (or $5\frac{1}{2}$) **b** $8\frac{1}{2}$ **c** $5\frac{7}{8}$ **d** $7\frac{2}{3}$ **e** $2\frac{1}{12}$

3 **a** $\frac{12}{12}$ **b** $\frac{20}{10}$ **c** $\frac{15}{5}$ **d** $\frac{24}{4}$ **e** $\frac{33}{3}$

4 **a** $1\frac{1}{4}$ **b** $3\frac{3}{8}$ **c** $4\frac{5}{12}$ **d** $6\frac{7}{10}$ **e** $11\frac{4}{5}$ **f** $\frac{2}{3}$ **g** $2\frac{1}{3}$ **h** $4\frac{1}{12}$ **i** $10\frac{1}{2}$ **j** $13\frac{2}{4}$ (or $13\frac{1}{2}$) **k** $8\frac{8}{12}$ (or $8\frac{2}{3}$) **l** $18\frac{6}{10}$ (or $18\frac{3}{5}$)

5

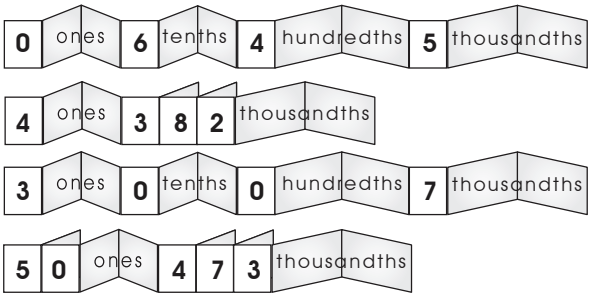


6 **a** $1\frac{7}{8}$ **b** $\frac{14}{8}$ **c** $1\frac{7}{8}$ **d** $\frac{7}{4}$ **e** $\frac{10}{8}$

6:04PT Progress Test answers and records are at the end of this section.

6:05

1



2 **a** 0·652 **b** 1·804 **c** 42·008 **d** 10·23 **e** 0·025 **f** 4·756

3 **a** (5 + 0·03) + 0·001 **b** (7) + 0·6 + 0·04 + 0·002 **c** (150) + 0·9 + 0·02 + 0·008

4 **a** 8 hundredths (or $\frac{8}{100}$) **b** 7 thousandths (or $\frac{7}{1000}$) **c** 6 hundredths (or $\frac{6}{100}$) **d** 4 ones (or 4)

5 **a** 0·426 **b** 0·732 **c** 0·265 **d** 1·387 **e** 15·081 **f** 25·304

6:06

1 **a** $\frac{5}{8}$ **b** $\frac{7}{8}$ **c** $\frac{7}{8}$ **d** $\frac{7}{8}$

2 **a** $\frac{10}{8}$ or $1\frac{2}{8}$ **b** $\frac{21}{8}$ or $2\frac{5}{8}$ **c** $\frac{12}{8}$ or $1\frac{4}{8}$ **d** $\frac{11}{8}$ or $1\frac{3}{8}$ **e** $\frac{12}{8}$ or $1\frac{4}{8}$ or $1\frac{1}{2}$ **f** $\frac{17}{8}$ or $2\frac{1}{8}$ **g** $\frac{16}{8}$ or 2 **h** $\frac{11}{8}$ or $1\frac{3}{8}$

3 **a** $\frac{1}{8}$ **b** $\frac{10}{8}$ or $1\frac{2}{8}$ or $1\frac{1}{4}$ **c** $\frac{2}{8}$ **d** $\frac{0}{8}$ or 0 **e** $\frac{6}{8}$ **f** $1\frac{4}{8}$ **g** $\frac{4}{8}$ **h** $\frac{3}{8}$ **i** $\frac{13}{8}$ or $1\frac{5}{8}$

4 **a** $\frac{6}{4}$ or $1\frac{2}{4}$ or $1\frac{1}{2}$ **b** $\frac{11}{9}$ or $1\frac{2}{9}$ **c** $\frac{22}{6}$ or $3\frac{4}{6}$ or 3 **d** $\frac{11}{10}$ or $1\frac{1}{10}$ **e** $\frac{13}{3}$ or $4\frac{1}{3}$ **f** $\frac{5}{3}$ or $1\frac{2}{3}$ **g** $\frac{9}{5}$ or $1\frac{4}{5}$ **h** $\frac{8}{5}$ or $1\frac{3}{5}$

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Answers to Level 6 Fractions and Decimals

6:06 Consolidation

1 **a** 0·004 **b** 0·010 (or 0·01), 0·011 **c** 0·014
d 0·040 (or 0·04), 0·041 **e** 0·158
f 4·240 (or 0·24), 4·242

2 **a** 0·863 **b** 0·438 **c** 2·651 **d** 0·023
e 0·01 **f** 0·001

3 **a** > **b** > **c** < **d** < **e** < **f** >

4 **a** 0·028, 0·102, 0·276, 0·293
b 0·053, 0·153, 0·513, 0·531
c 0·06, 0·406, 0·6, 0·604
d 0·949, 1·099, 1·49, 1·92

5

6 **a** Answers will vary.

6:06 Extension

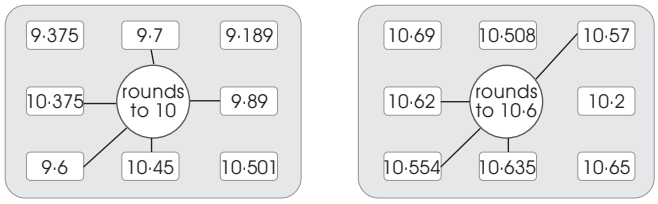
1 Answers will vary. (eg **a** 0·61 **b** 0·83 **c** 0·91
d 1·242 **e** 5·369 **f** 8·451)

2 4 ones, 2 tenths, $\frac{9}{100}$ $\frac{7}{1000}$

3 **a** 4 + 0·2 + 0·09 + 0·007 **b** 0·05 + 0·007
c 1 + 0·6 + 0·004

4 **a** 0·2 (0 — 1) **b** 0·25 (0 — 1) **c** 0·43 (0 — 1)
d 0·06 (0 — 0·1) **e** 0·48 (0·4 — 0·5) **f** 0·75 (0·7 — 0·8)
g 3·08 (3·05 — 3·1) **h** 4·96 (4·9 — 5) **i** 10·94 (10·9 — 11)

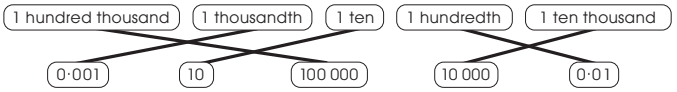
5



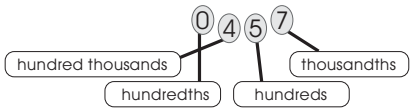
6:07

1 **a** 111 111·111

b



2 **a** 6000 **b** 20 **c** $\frac{1}{10}$ **d** 30 000
e



f 436 529·107

3 400 000 + 30 000 + 6 000 + 500 + 20 + 9 + $\frac{1}{10}$ $\frac{7}{1000}$

4 **a** 246 801·357 **b** 356 498·172 **c** 912 964·253
d 246 802·357 **e** 246 901·357 **f** 246 801·358
g 246 801·257 **h** 245 801·357 **i** 246 801·307
j 10 000

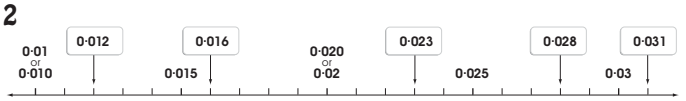
6:08

1

0·001	0·002	0·003	0·004	0·005	**0·006**	**0·007**	**0·008**	**0·009**	0·01 or 0·010
0·011	**0·012**	**0·013**	**0·014**	0·015	**0·016**	**0·017**	**0·018**	**0·019**	0·02 or 0·020

a 30 **b** 90 **c** 100 **d** 1 000

2

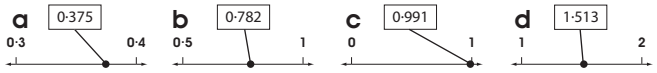


3 Answers will vary.

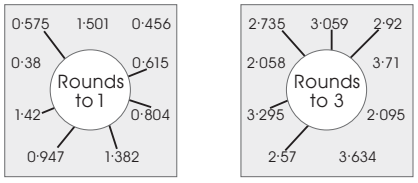
4 **a** > **b** < **c** < **d** < **e** > **f** <

5 **a** 0·165, 0·516, 0·615, 0·736
b 0·384, 0·499, 0·563, 0·62

6



7



6:09

1 **a** $\frac{5}{6} + \frac{5}{6} + \frac{5}{6} + \frac{5}{6} = \frac{20}{6}$ or $3\frac{2}{6}$ (or $3\frac{1}{3}$)
b $\frac{3}{8} + \frac{3}{8} + \frac{3}{8} = \frac{9}{8}$ or $1\frac{1}{8}$
c $\frac{6}{7} + \frac{6}{7} + \frac{6}{7} + \frac{6}{7} + \frac{6}{7} + \frac{6}{7} = \frac{36}{7}$ or $5\frac{1}{7}$

2 **a** $\frac{6}{5}$ or $1\frac{1}{5}$ **b** 2 or $\frac{14}{12}$, $1\frac{2}{12}$ (or $1\frac{1}{6}$)
c 3 lots of 2 ninths = $\frac{3\times2}{9} = \frac{6}{9}$ (or $\frac{2}{3}$)
d 5 lots of 3 eighths = $\frac{5\times3}{8} = \frac{15}{8}$ or $1\frac{7}{8}$

3 **a** $\frac{4}{9}$ **b** $\frac{15}{11}$ or $1\frac{4}{11}$ **c** $\frac{24}{7}$ or $3\frac{3}{7}$
d $\frac{24}{5}$ or $4\frac{4}{5}$ **e** $\frac{36}{12}$ or 3 **f** $\frac{18}{13}$ or $1\frac{5}{13}$
g $\frac{35}{9}$ or $3\frac{8}{9}$ **h** $\frac{42}{14}$ or 3 **i** $\frac{72}{9}$ or 8

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Answers to Level 6 Fractions and Decimals

6:09 Consolidation

1 **a** $\frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} = \frac{4}{10}$

b $\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = \frac{5}{3}$

c $\frac{7}{12} + \frac{7}{12} + \frac{7}{12} = \frac{21}{12}$ or $1\frac{9}{12}$ (or $1\frac{3}{4}$)

d $\frac{2}{5} + \frac{2}{5} + \frac{2}{5} + \frac{2}{5} + \frac{2}{5} = \frac{10}{5}$ or 2

2 **a** $\frac{6}{5}$ or $1\frac{1}{5}$ **b** 9 lots of 2 thirds = $\frac{9 \times 2}{3} = \frac{18}{3}$ or 6

c 5 lots of 7 eighths = $\frac{5 \times 7}{8} = \frac{35}{8}$ or $4\frac{3}{8}$

d 9 lots of 1 half = $\frac{9 \times 1}{2} = \frac{9}{2}$ or $4\frac{1}{2}$

e $\frac{4 \times 3}{7} = \frac{12}{7}$ or $1\frac{5}{7}$ **f** $\frac{8 \times 4}{9} = \frac{32}{9}$ or $3\frac{5}{9}$

3 **a** $\frac{30}{4}$ or $7\frac{2}{4}$ **b** $\frac{35}{6}$ or $5\frac{5}{6}$ **c** $\frac{56}{100}$ (or $\frac{28}{50}$)

d $\frac{30}{8}$ or $3\frac{6}{8}$ (or $3\frac{3}{4}$) **e** $\frac{12}{10}$ or $1\frac{2}{10}$ (or $1\frac{1}{5}$)

f $\frac{9}{12}$ (or $\frac{3}{4}$) **g** $\frac{12}{5}$ or $2\frac{2}{5}$

h $\frac{22}{20}$ or $1\frac{2}{20}$ (or $1\frac{1}{10}$) **i** $\frac{22}{3}$ or $7\frac{1}{3}$

6:10

1 **a** $\frac{2}{4}$, $\frac{4}{8}$ **b** $\frac{6}{8}$, $\frac{12}{16}$

2 **a** $\frac{2}{10}$ **b** $\frac{12}{18}$ **c** $\frac{10}{45}$ **d** $\frac{3}{24}$

3 **a** $\frac{2}{12}$ **b** $\frac{2}{16}$ **c** $\frac{4}{18}$ **d** $\frac{10}{14}$

e $\frac{3}{21}$ **f** $\frac{6}{15}$ **g** $\frac{12}{15}$ **h** $\frac{21}{27}$

4

	$\times 3$ $\times 3$	$\times 4$ $\times 4$	$\times 6$ $\times 6$
$\frac{1}{2}$	$\frac{3}{6}$	$\frac{4}{8}$	$\frac{6}{12}$
$\frac{1}{4}$	$\frac{3}{12}$	$\frac{4}{16}$	$\frac{6}{24}$
$\frac{1}{3}$	$\frac{3}{9}$	$\frac{4}{12}$	$\frac{6}{18}$

5 Answers will vary.

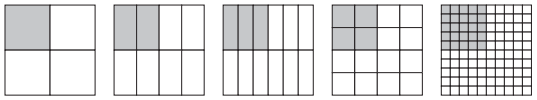
a $\frac{1}{6} = \frac{2}{12} = \frac{3}{18}$ etc **b** $\frac{3}{5} = \frac{6}{10} = \frac{9}{15}$ etc

c $\frac{3}{8} = \frac{6}{16} = \frac{9}{24}$ etc **d** $\frac{2}{9} = \frac{4}{18} = \frac{6}{27}$ etc

e $\frac{5}{12} = \frac{10}{24} = \frac{15}{36}$ etc **f** $\frac{5}{7} = \frac{10}{14} = \frac{15}{21}$ etc

6:10 Consolidation

1 **a**



Different sections may be shaded but the same number of sections will need to be shaded.

$\frac{2}{8} = \frac{3}{12} = \frac{4}{16} = \frac{25}{100}$ **b** $\frac{6}{8} = \frac{9}{12} = \frac{12}{16} = \frac{75}{100}$

2 **a** $\frac{2}{10}$ **b** $\frac{6}{10}$ **c** $\frac{2}{5}$ **d** $\frac{4}{5}$

3 **a** $\frac{3}{9}$ **b** $\frac{4}{12}$ **c** $\frac{2}{6}$ **d** $\frac{8}{24}$ **e** $\frac{2}{10}$ **f** $\frac{3}{15}$

g $\frac{4}{20}$ **h** $\frac{10}{50}$

4 **a** $\frac{2}{4}$ **b** $\frac{2}{8}$ **c** $\frac{2}{6}$ **d** $\frac{2}{16}$ **e** $\frac{5}{30}$ **f** $\frac{5}{25}$

g $\frac{5}{60}$ **h** $\frac{5}{50}$ **i** $\frac{6}{15}$ **j** $\frac{9}{21}$ **k** $\frac{39}{300}$ **l** $\frac{15}{24}$

5 Answers will vary.

a $\frac{4}{16}, \frac{8}{32}, \frac{16}{64}$ **b** $\frac{2}{6}, \frac{4}{12}, \frac{8}{24}, \frac{16}{48}$ **c** $\frac{2}{12}, \frac{4}{24}, \frac{8}{48}, \frac{16}{96}$ **d** $\frac{2}{4}, \frac{3}{6}, \frac{4}{8}, \frac{5}{10}$

6:11

1 **a** $\frac{2}{5}$ **b** $\frac{5}{6}$ **c** $\frac{4}{5}$ **d** $\frac{1}{2}$

e $\frac{1}{6}$ **f** $\frac{1}{4}$ **g** $\frac{1}{3}$ **h** $\frac{3}{8}$

2 **a** $\frac{1}{5}$ **b** $\frac{1}{7}$ **c** $\frac{4}{5}$ **d** $\frac{6}{9}$

e $\frac{1}{5}$ **f** $\frac{2}{9}$ **g** $\frac{5}{6}$ **h** $\frac{6}{11}$

3 **a** $\frac{4}{9}$ **b** $\frac{4}{5}$ **c** $\frac{3}{5}$ **d** $\frac{9}{11}$

e $\frac{2}{9}$ **f** $\frac{4}{9}$ **g** $\frac{7}{8}$ **h** $\frac{5}{8}$

4 **a** $\frac{1}{3}$ **b** $\frac{3}{5}$ **c** $\frac{1}{10}$ **d** $\frac{1}{2}$ **e** $\frac{3}{5}$

f $\frac{1}{3}$ **g** $\frac{3}{4}$ **h** $\frac{3}{4}$ **i** $\frac{7}{8}$ **j** $\frac{7}{8}$

6:11 Consolidation

1 **a** $\frac{1}{2}$ **b** $\frac{3}{4}$ **c** $\frac{1}{4}$ **d** $\frac{1}{3}$

2 **a** $\frac{1}{6}$ **b** $\frac{5}{6}$ **c** $\frac{3}{6}$ (or $\frac{1}{2}$) **d** $\frac{4}{6}$ (or $\frac{2}{3}$)

3 **a** $\frac{1}{8}$ **b** $\frac{4}{8}$ (or $\frac{1}{2}$) **c** $\frac{4}{10}$ (or $\frac{2}{5}$) **d** $\frac{1}{6}$

e $\frac{7}{8}$ **f** $\frac{2}{7}$ (or $\frac{4}{14}$) **g** $\frac{2}{3}$ **h** $\frac{4}{7}$

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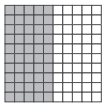
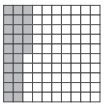
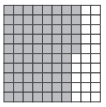
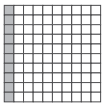
Answers to Level 6 Fractions and Decimals

4 **a** $\frac{2}{5}$ **b** $\frac{1}{6}$ **c** $\frac{3}{7}$ **d** $\frac{2}{3}$ **e** $\frac{1}{5}$ **f** $\frac{3}{4}$
g $\frac{1}{3}$ **h** $\frac{7}{10}$

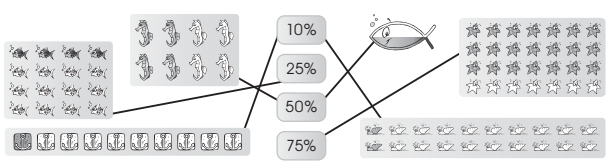
5 **a** $\frac{16}{64}$, $\frac{8}{32}$, $\frac{4}{16}$, $\frac{2}{8}$, $\frac{1}{4}$ **b** $\frac{16}{80}$, $\frac{8}{40}$, $\frac{4}{20}$, $\frac{2}{10}$, $\frac{1}{5}$
c $\frac{32}{48}$, $\frac{16}{24}$, $\frac{8}{12}$, $\frac{4}{6}$, $\frac{2}{3}$ **d** $\frac{48}{56}$, $\frac{24}{28}$, $\frac{12}{14}$, $\frac{6}{7}$

6:12

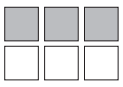
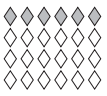
1 **a**  **b**  **c**  **d** 

$\frac{1}{2}$ = 50 % $\frac{1}{4}$ = 25 % $\frac{3}{4}$ = 75 % $\frac{1}{10}$ = 10 %

2 **a** 75% **b** 25% **c** 50% **d** 30%

3 

4 Answers for colouring will vary.

a  **b** **c** 

50% of 6 = 3 50% of 20 = 10 25% of 24 = 6

d **e** **f**

25% of 8 = 2 75% of 12 = 9 30% of 30 = 9

6:13

1 **a**

$\frac{1}{100}$	1%	0·01
$\frac{1}{10}$	10%	0·**1**
$\frac{1}{5}$	**20**%	0·2
$\frac{1}{4}$	25%	0·**25**

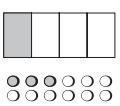
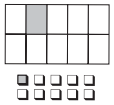
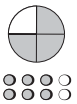
b

$\frac{1}{2}$	**50**%	0·**5**
$\frac{3}{10}$	30%	0·**3**
$\frac{4}{5}$	**80**%	0·8
$\frac{3}{4}$	**75**%	0·**75**

2 **a** 25% **b** 1% **c** 10% **d** 20% **e** 40%

3 **a** $\frac{25}{100}$, $\frac{1}{4}$ **b** $\frac{75}{100}$, $\frac{3}{4}$ **c** $\frac{50}{100}$, $\frac{1}{2}$ **d** $\frac{10}{100}$, $\frac{1}{10}$
e $\frac{20}{100}$, $\frac{1}{5}$ **f** $\frac{30}{100}$, $\frac{3}{10}$ **g** $\frac{60}{100}$, $\frac{3}{5}$ **h** $\frac{90}{100}$, $\frac{9}{10}$

4 **a** $\frac{3}{10}$, 30% **b** $\frac{1}{2}$, 50% **c** $\frac{1}{4}$, 25% **d** $\frac{3}{4}$, 75%
e $\frac{8}{8}$, 100%, 100% of 8 = 8
f $\frac{4}{10}$, 40%, 40% of 10 = 4
g $\frac{4}{8}$, 50%, 50% of 8 = 4
h $\frac{1}{10}$ or $\frac{10}{100}$, 10%, 10% of 100 = 10

5 **a**  **b**  **c**  **d**

6:14

1 20%, 30%, 60%, 80%

2 **a** $\frac{1}{2}$ of 50 = 25 **b** $\frac{1}{10}$ of 90 = 9
c $\frac{1}{4}$ of 80 = 20 **d** $\frac{3}{4}$ of 80 = 60

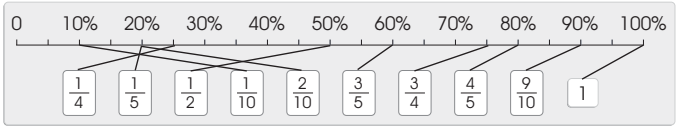
3 **a** $\frac{2}{10}$ of 90 = 18 **b** $\frac{3}{10}$ of 90 = 27
c $\frac{7}{10}$ of 90 = 63 **d** $\frac{8}{10}$ of 90 = 72

4 **a** \$2 **b** \$24 **c** \$18 **d** \$20
e \$2 100 **f** \$4 000 **g** \$24 **h** \$2 400
i \$45 **j** \$72 **k** \$72 **l** \$3 240

5 **a** 50% of 100 **b** 25% of 200 **c** 10% of 100
d 60% of 60 **e** 10% of 400 **f** 80% of 20

6:14 Consolidation

1



2 **a** $\frac{1}{4}$ of 40 = 10 **b** $\frac{1}{4}$ of 60 = 15 **c** $\frac{1}{4}$ of 200 = 50
d $\frac{1}{2}$ of 30 = 15 **e** $\frac{1}{2}$ of 140 = 70 **f** $\frac{1}{2}$ of 560 = 280
g $\frac{1}{10}$ of 20 = 2 **h** $\frac{1}{10}$ of 120 = 12 **i** $\frac{1}{10}$ of 1000 = 100

3 **a** $\frac{3}{10}$ of \$60
= \$60 ÷ 10 × 3
= \$18

b $\frac{6}{10}$ of \$180
= \$180 ÷ 10 × 6
= \$108

c $\frac{4}{10}$ of 240
= 240 ÷ 10 × 4
= 96

d $\frac{3}{4}$ of 300
= 300 ÷ 4 × 3
= 225

4 **a** 50 **b** 10 **c** 60
d lion, elephant, monkey, tiger, (snake, giraffe, others) all least preferred.

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Answers to Level 6 Fractions and Decimals

6:15

1

Name	Quiz 1 (fraction)	Quiz 1 (percent)	Quiz 2 (fraction)	Quiz 2 (percent)
Fin	$\frac{75}{100}$	75%	$\frac{42}{50}$	84%
Louis	$\frac{82}{100}$	**82%**	$\frac{36}{50}$	**72%**
Hang	$\frac{70}{100}$	**70%**	$\frac{35}{50}$	**70%**
Suzy	$\frac{74}{100}$	**74%**	$\frac{37}{50}$	**74%**
Leah	$\frac{86}{100}$	**86%**	$\frac{50}{50}$	**100%**
Emma	$\frac{93}{100}$	**93%**	$\frac{44}{50}$	**88%**

2 **a** Fin and Leah **b** Louis and Emma
c Hang and Suzy

3 **a** 80 **b** $40\frac{2}{3}$ **c** 80% **d** $81\frac{1}{3}$%

4

Type	Apple	Meat	Potato	Others
Percentage made	5%	60%	10%	25%
Number made	**10**	**120**	**20**	**50**

5 **a** 925 **b** 1 820 **c** $82 069.35
d $8 525.30

6 **c** $3 750 (more than Diane)

6:16

1 **a** $27\frac{1}{3}$ **b** $12\frac{2}{6}$ **c** $11\frac{5}{8}$ **d** $24\frac{1}{4}$ **e** $39\frac{1}{2}$
f $9\frac{5}{9}$ **g** $9\frac{1}{5}$ **h** $11\frac{4}{7}$ **i** $19\frac{1}{8}$ **j** $40\frac{6}{7}$
k 73 (or $73\frac{0}{6}$) **l** $155\frac{3}{4}$

2 **a** $2\frac{3}{6}$ (or $2\frac{1}{2}$ doughnuts) **b** $47\frac{3}{5}$ cm (or 47·6 cm)
c Red: $8\frac{2}{3}$, Yellow: $9\frac{2}{3}$, Blue: $10\frac{2}{3}$, Tim and Mark

6:17

1 **a** $12.40 **b** 12·4 **c** $5.50 **d** 5·5

2 **a** $8.50 **b** $9.25 **c** $33.60
d $201.50 **e** $414.50 **f** $125.40
g $469 **h** $19.25 **i** $34.50

3 **a** 5·75 **b** 25·5 **c** 56·75
d 432·5 **e** 90·4 **f** 91·25

4 **a** 0·25 **b** 0·88 **c** 0·6 **d** 0·78
e 2·37 **f** 8·74 **g** 1·53 **h** 11·75
i 4·24 **j** 15·96 **k** 3·54 **l** 18·30

6:17PT Progress Test answers and records are at the end of this section.

6:18

1 **a** $\frac{2}{10}$ **b** $\frac{6}{12}$ **c** $\frac{6}{12}$ **d** $\frac{2}{8}$ **e** $\frac{3}{12}$ **f** $\frac{8}{12}$
g $\frac{2}{12}$ **h** $\frac{10}{12}$ **i** $\frac{16}{20}$ **j** $\frac{10}{100}$ **k** $\frac{30}{100}$ **l** $\frac{2}{16}$
m $\frac{3}{9}$ **n** $\frac{6}{9}$ **o** $\frac{90}{100}$ **p** $\frac{14}{16}$ **q** $\frac{6}{9}$ **r** $\frac{6}{27}$

2 **a** $\frac{1}{6}$ **b** $\frac{3}{4}$ **c** $\frac{1}{2}$ **d** $\frac{2}{3}$ **e** $\frac{2}{3}$ **f** $\frac{3}{4}$
g $\frac{1}{3}$ **h** $\frac{1}{4}$ **i** $\frac{1}{4}$ **j** $\frac{1}{2}$ **k** $\frac{4}{5}$ **l** $\frac{2}{5}$
m $\frac{1}{2}$ **n** $\frac{7}{10}$

3 **a** $\frac{4}{20}$ **b** $\frac{4}{16}$ **c** $\frac{10}{20}$ **d** $\frac{8}{64}$ **e** $\frac{8}{20}$ **f** $\frac{12}{16}$
g $\frac{15}{30}$ **h** $\frac{5}{40}$

4 **a** $\frac{5}{6}$ **b** $\frac{1}{8}$ **c** $\frac{1}{4}$ **d** $\frac{1}{2}$ **e** $\frac{1}{5}$ **f** $\frac{7}{10}$
g $\frac{1}{4}$ **h** $\frac{2}{3}$ **i** $\frac{2}{3}$ **j** $\frac{8}{9}$ **k** $\frac{3}{8}$
l $\frac{5}{4}$ (or $1\frac{1}{4}$)

6:18 Extension

1 **a** $\frac{2}{4}=\frac{3}{6}=\frac{4}{8}=\frac{5}{10}=\frac{50}{100}$ **b** $\frac{2}{8}=\frac{3}{12}=\frac{4}{16}=\frac{5}{20}=\frac{25}{100}$
c $\frac{2}{10}=\frac{3}{15}=\frac{4}{20}=\frac{5}{25}=\frac{20}{100}$ **d** $\frac{2}{6}=\frac{3}{9}=\frac{4}{12}=\frac{5}{15}=\frac{10}{30}$
e $\frac{4}{10}=\frac{6}{15}=\frac{8}{20}=\frac{10}{25}=\frac{40}{100}$ **f** $\frac{4}{6}=\frac{6}{9}=\frac{8}{12}=\frac{10}{15}=\frac{20}{30}$

2 Answers will vary.

3 **a** $\frac{8}{14}=\frac{4}{7}$ **b** $\frac{8}{16}=\frac{4}{8}=\frac{2}{4}=\frac{1}{2}$
c $\frac{4}{12}=\frac{1}{3}$ **d** $\frac{16}{20}=\frac{8}{10}=\frac{4}{5}$
e $\frac{16}{20}=\frac{4}{5}$ **f** $\frac{12}{16}=\frac{6}{8}=\frac{3}{4}$

4 **a** $\frac{2}{3}$ or $\frac{4}{6}$ **b** $\frac{2}{5}$ or $\frac{4}{10}$ **c** $\frac{1}{4}$ or $\frac{2}{8}$ **d** $\frac{3}{4}$
e $\frac{1}{2}$ or $\frac{2}{4}$ **f** $\frac{3}{5}$ or $\frac{6}{10}$ or $\frac{12}{20}$ or $\frac{30}{50}$ **g** 1 or $\frac{1}{1}$
h $\frac{1}{3}$ or $\frac{3}{9}$ or $\frac{2}{6}$ **i** $\frac{1}{3}$ **j** $\frac{1}{5}$ or $\frac{3}{15}$
k $\frac{1}{4}$ or $\frac{3}{12}$ or $\frac{5}{20}$ **l** $\frac{1}{4}$ or $\frac{3}{12}$ or $\frac{4}{16}$ or $\frac{6}{24}$ **m** $\frac{2}{3}$
n $\frac{3}{5}$ or $\frac{9}{15}$ **o** $\frac{3}{4}$ or $\frac{9}{12}$ or $\frac{15}{20}$ or $\frac{9}{12}$
p $\frac{3}{4}$ or $\frac{12}{16}$ or $\frac{16}{24}$ or $\frac{9}{12}$

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Answers to Level 6 Fractions and Decimals

6:19

1 **a** $\frac{5}{6}$ **b** $\frac{6}{8} + \frac{1}{8} = \frac{7}{8}$ **c** $\frac{3}{9} + \frac{1}{9} = \frac{4}{9}$

d $\frac{6}{10} + \frac{3}{10} = \frac{9}{10}$ **e** $\frac{4}{8} + \frac{3}{8} = \frac{7}{8}$

f $\frac{1}{12} + \frac{2}{12} = \frac{3}{12}$ (or $\frac{1}{4}$) **g** $\frac{2}{8} + \frac{3}{8} = \frac{5}{8}$

h $\frac{5}{12} + \frac{4}{12} = \frac{9}{12}$ **i** $\frac{1}{6} + \frac{2}{6} = \frac{3}{6}$ or $\frac{1}{2}$

j $\frac{7}{8} + \frac{2}{8} = \frac{9}{8}$ or $1\frac{1}{8}$ **k** $\frac{7}{8} + \frac{4}{8} = \frac{11}{8}$ or $1\frac{3}{8}$

l $\frac{5}{6} + \frac{3}{6} = \frac{8}{6}$ or $1\frac{2}{6}$ (or $1\frac{1}{3}$)

m $\frac{3}{12} + \frac{5}{12} = \frac{8}{12}$ or $\frac{2}{3}$ (or $\frac{4}{6}$) **n** $\frac{6}{20} + \frac{5}{20} = \frac{11}{20}$

o $\frac{8}{12} + \frac{9}{12} = \frac{17}{12}$ or $1\frac{5}{12}$

6:19 Consolidation

1 **a** $\frac{3}{6}$ **b** $\frac{4}{6}$ **c** $\frac{2}{6}$ **d** $\frac{4}{8}$

e $\frac{6}{8}$ **f** $\frac{2}{8}$ **g** $\frac{12}{8}$ **h** $\frac{6}{12}$

i $\frac{3}{12}$ **j** $\frac{4}{12}$ **k** $\frac{8}{12}$

2 **a** $\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$ **b** $\frac{2}{6} + \frac{1}{6} = \frac{3}{6}$ **c** $\frac{1}{10} + \frac{2}{10} = \frac{3}{10}$

d $\frac{2}{4} + \frac{3}{4} = \frac{5}{4}$ or $1\frac{1}{4}$ **e** $\frac{4}{6} + \frac{1}{6} = \frac{5}{6}$ **f** $\frac{3}{10} + \frac{4}{10} = \frac{7}{10}$

g $\frac{3}{8} + \frac{6}{8} = \frac{9}{8}$ or $1\frac{1}{8}$ **h** $\frac{1}{8} + \frac{6}{8} = \frac{7}{8}$ **i** $\frac{4}{10} + \frac{3}{10} = \frac{7}{10}$

j $\frac{7}{12} + \frac{10}{12} = \frac{17}{12}$ or $1\frac{5}{12}$ **k** $\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$ **l** $\frac{6}{9} + \frac{2}{9} = \frac{8}{9}$

3 **a** $\frac{10}{20} + \frac{13}{20} = \frac{23}{20}$ or $1\frac{3}{20}$ **b** $\frac{4}{12} + \frac{5}{12} = \frac{9}{12}$

c $\frac{6}{14} + \frac{5}{14} = \frac{11}{14}$ **d** $\frac{25}{30} + \frac{11}{30} = \frac{36}{30}$ or $1\frac{6}{30}$

e $\frac{70}{100} + \frac{23}{100} = \frac{93}{100}$ **f** $\frac{16}{36} + \frac{5}{36} = \frac{21}{36}$

g $\frac{21}{30} + \frac{11}{30} = \frac{32}{30}$ or $1\frac{2}{30}$ **h** $\frac{15}{100} + \frac{69}{100} = \frac{84}{100}$

i $\frac{10}{36} + \frac{5}{36} = \frac{15}{36}$

6:20

1 **a** $\frac{3}{8} - \frac{2}{8} = \frac{1}{8}$ **b** $\frac{10}{14} - \frac{3}{14} = \frac{7}{14}$ (or $\frac{1}{2}$)

c $\frac{5}{12} - \frac{4}{12} = \frac{1}{12}$ **d** $\frac{7}{15} - \frac{3}{15} = \frac{4}{15}$

e $\frac{3}{24} - \frac{1}{24} = \frac{2}{24}$ (or $\frac{1}{12}$) **f** $\frac{6}{9} - \frac{5}{9} = \frac{1}{9}$

g $\frac{9}{12} - \frac{3}{12} = \frac{6}{12}$ (or $\frac{1}{2}$) **h** $\frac{5}{6} - \frac{2}{6} = \frac{3}{6}$ (or $\frac{1}{2}$)

i $\frac{8}{18} - \frac{3}{18} = \frac{5}{18}$ **j** $\frac{13}{15} - \frac{10}{15} = \frac{3}{15}$ (or $\frac{1}{5}$)

k $\frac{8}{10} - \frac{3}{10} = \frac{5}{10}$ (or $\frac{1}{2}$) **l** $\frac{70}{100} - \frac{43}{100} = \frac{27}{100}$

2 **a** $\frac{8}{12}$ m (or $\frac{2}{3}$ m) **b** $\frac{1}{8}$ of a tank **c** $\frac{3}{8}$ L

6:20 Consolidation

1 **a** $\frac{6}{8} - \frac{3}{8} = \frac{3}{8}$ **b** $\frac{6}{12} - \frac{5}{12} = \frac{1}{12}$ **c** $\frac{8}{12} - \frac{7}{12} = \frac{1}{12}$

d $\frac{8}{10} - \frac{3}{10} = \frac{5}{10}$ or $\frac{1}{2}$ **e** $\frac{4}{8} - \frac{1}{8} = \frac{3}{8}$ **f** $\frac{14}{20} - \frac{7}{20} = \frac{7}{20}$

g $\frac{7}{12} - \frac{4}{12} = \frac{3}{12}$ or $\frac{1}{4}$ **h** $\frac{7}{8} - \frac{2}{8} = \frac{5}{8}$ **i** $\frac{5}{9} - \frac{3}{9} = \frac{2}{9}$

j $\frac{9}{10} - \frac{4}{10} = \frac{5}{10}$ or $\frac{1}{2}$ **k** $\frac{73}{100} - \frac{30}{100} = \frac{43}{100}$ **l** $\frac{19}{24} - \frac{15}{24} = \frac{4}{24}$ or $\frac{1}{6}$

m $\frac{7}{8} - \frac{4}{8} = \frac{3}{8}$ **n** $\frac{10}{12} - \frac{5}{12} = \frac{5}{12}$ **o** $\frac{5}{6} - \frac{3}{6} = \frac{2}{6}$ or $\frac{1}{3}$

p $\frac{6}{9} - \frac{4}{9} = \frac{2}{9}$ **q** $\frac{18}{20} - \frac{7}{20} = \frac{11}{20}$ **r** $\frac{9}{12} - \frac{3}{12} = \frac{6}{12}$ or $\frac{1}{2}$

6:21

1 **a**

Marked price	**$450**
10% discount	**$45**
Sale Price	**$405**

b

Marked price	**$800**
10% discount	**$80**
Sale Price	**$720**

2 **a**

Marked price	**$2 400**
20% discount	**$480**
Sale Price	**$1 920**

b

Marked price	**$50**
20% discount	**$10**
Sale Price	**$40**

c $200 **d** $2 280 **e** $153 **f** $328.95

3 **a** $720 **b** $60 **c** $180 **d** $420

6:21 Consolidation

1 **a** $\frac{1}{2}$ **b** $\frac{1}{4}$ **c** $\frac{3}{4}$ **d** $\frac{1}{10}$

e $\frac{1}{5}$ **f** $\frac{3}{10}$ **g** $\frac{6}{10}$ **h** $\frac{9}{10}$

2 **a** $10 **b** $15 **c** $150 **d** $400

e 45 **f** 90 **g** 1 **h** 700

3 **a** 20% of $150 **b** 50% of $3 000

c 20% of $1 500 **d** 40% 0f $1 000

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Answers to Level 6 Fractions and Decimals

4 Answers will vary. 25% of a small amount will be less than 20% of a large amount.

5 **a** $38 **b** $17.50 **c** $24.50 **d** $138
e $218 **f** $218 **g** $54.50

6:22

1 **a** 1214 **b** 225 **c** 907 **d** 2415
e 0·735 **f** 5·11 **g** 0·247 **h** 62·6

2 **a** 1865 r 2 **b** 1578 r 2 **c** 2158 (r 0) **d** 1133 r 6
e 750 **f** 1353 r 1 **g** 1201 r 5 **h** 872 r 1

3 **a** $1559\frac{2}{4}$ (or $1559\frac{1}{2}$) **b** $205\frac{4}{6}$ (or $205\frac{2}{3}$)
c $548\frac{6}{7}$ **d** $4501\frac{1}{2}$ **e** $2480\frac{2}{3}$ **f** $604\frac{4}{5}$
g $810\frac{2}{9}$ **h** $1166\frac{4}{6}$ (or $1166\frac{2}{3}$)

4 **a** $6.75 **b** $10.25 **c** $7.60 **d** $0.34
e 45·5 **f** 98·4 **g** 75·25 **h** 396·5

6:23

1 **a** 2·362 **b** 38·479
c A: 7 tenths, B: 9 thousandths, C: 4 tenths, D: 9 hundredths
d 2·362 (E) **e** 3·396 (D) **f** 12·725 (A)
g E, D, B, A, C

2 **a** T **b** F **c** T **d** T **e** T **f** F

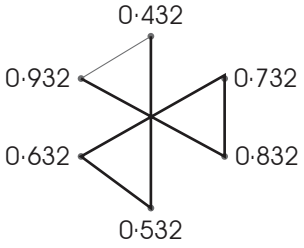
3

the nearest	436·72	1235·39	26·786	0·374	7·825
100	400	1200	0	0	0
10	440	1240	30	0	10
1	437	1235	27	0	8
tenth	436·7	1235·4	26·8	0·4	7·8

4 **a** 2 (eg $2.95) **b** 1 (of a cent eg 127.9c)
c 2 (9·92s) **d** 1 (eg 50·4%)

5 **a** 2·08 m **b** 6·856

6



6:23PT Progress Test answers and records are at the end of this section.

6:24

1 **a** $\frac{6}{3}$ or 2 **b** $\frac{4}{4}$ or 1 **c** $\frac{8}{11}$
d $1\frac{6}{7}$ **e** $2\frac{4}{5}$ **f** $8\frac{9}{13}$
g $\frac{5}{8}$ **h** $\frac{11}{12}$ **i** $\frac{8}{9}$

2 **a** $\frac{4}{9}$ **b** $\frac{1}{7}$ **c** $\frac{5}{23}$
d $\frac{1}{6}$ **e** $2\frac{7}{12}$ **f** $15\frac{1}{3}$
g $\frac{9}{12}$ **h** $\frac{3}{10}$ **i** $\frac{13}{100}$

3 **a** $\frac{4}{3}$ or $1\frac{1}{3}$ **b** $\frac{6}{8}$ **c** $\frac{27}{4}$ or $6\frac{3}{4}$
d $\frac{20}{6}$ or $3\frac{2}{6}$ **e** $\frac{6}{9}$ **f** $\frac{4}{3}$ or $1\frac{1}{3}$
g $\frac{15}{8}$ or $1\frac{7}{8}$ **h** $\frac{24}{10}$ or $2\frac{4}{10}$

4

a Complete for 100 cakes

INGREDIENTS

2000	g unsalted butter
2000	g caster sugar
40	eggs
500	ml milk
1800	g self raising flour
15	tsp vanilla extract

Icing

1250	g unsalted butter
5	g icing sugar
600	ml milk
10	tsp vanilla extract
25	drops of colouring

b Complete for 30 cakes

INGREDIENTS

600	g unsalted butter
600	g caster sugar
12	eggs
150	ml milk
540	g self raising flour
4·5	tsp vanilla extract

Icing

375	g unsalted butter
1·5	g icing sugar
180	ml milk
3	tsp vanilla extract
7·5	drops of colouring

6:24 Consolidation B

1 **a** $\frac{2}{10}$ **b** $\frac{2}{8}$ **c** $\frac{3}{12}$ **d** $\frac{3}{9}$
e $\frac{9}{12}$ **f** $\frac{6}{10}$ **g** $\frac{10}{16}$ **h** $\frac{10}{15}$

2 **a** $\frac{3}{6} + \frac{1}{6} = \frac{4}{6}$ or $\frac{2}{3}$ **b** $\frac{2}{8} + \frac{1}{8} = \frac{3}{8}$
c $\frac{7}{12} + \frac{3}{12} = \frac{10}{12}$ or $\frac{5}{6}$ **d** $\frac{3}{12} + \frac{9}{12} = \frac{12}{12}$ or 1
e $\frac{3}{10} + \frac{5}{10} = \frac{8}{10}$ or $\frac{4}{5}$ **f** $\frac{6}{12} + \frac{7}{12} = \frac{13}{12}$ or $1\frac{1}{12}$

3 **a** $\frac{4}{8} - \frac{3}{8} = \frac{1}{8}$ **b** $\frac{9}{12} - \frac{5}{12} = \frac{4}{12}$ or $\frac{1}{3}$ **c** $\frac{7}{10} - \frac{4}{10} = \frac{3}{10}$
d $\frac{37}{100} - \frac{20}{100} = \frac{17}{100}$ **e** $\frac{4}{6} - \frac{1}{6} = \frac{3}{6}$ or $\frac{1}{2}$ **f** $\frac{12}{15} - \frac{11}{15} = \frac{1}{15}$

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Answers to Level 6 Fractions and Decimals

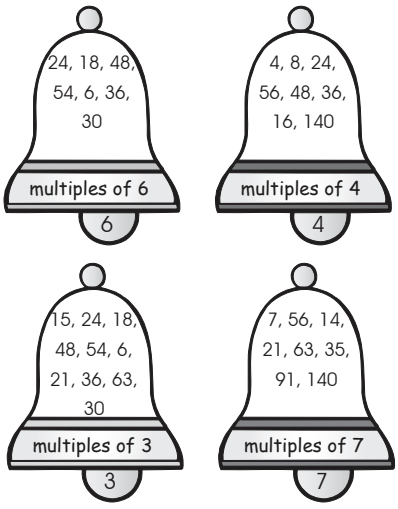
6:25

1 **a** The height of the candle drawn should be 27 mm.

b $\frac{1}{2}$, $\frac{3}{8}$, $\frac{3}{4}$, $\frac{7}{8}$

2 **a** 11:12 (am) **b** 62°C

3



4 ★ = 27 🔔 = 4 🕯 = 24

🎁 = 3 = 12

6:25PT Progress Test answers and records are at the end of this section.

Fractions and Decimals answers to **Maths Builder 6** can be found in the Level Contents as

6:NA00D Answers: **6:NA01 - 6:NA54C**
6:NA00E Answers: **6:NA55 - 6:NA93**

Test

Assessment for the whole of Level 6

1 **a** $\frac{72}{100}$ **b** 0·72 **c** 72%

2 **a** 50% **b** 25% **c** 10%
d 75% **e** 30% **f** 20%

3 **a** 18 **b** 6 **c** 50 **d** 20

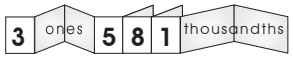
4 **a** $\frac{7}{4}$ or $1\frac{3}{4}$ **b** $\frac{19}{8}$ or $2\frac{3}{8}$

5 **a** $1\frac{5}{9}$ **b** $4\frac{7}{8}$ **c** $3\frac{1}{4}$ **d** $2\frac{5}{12}$

6 **a** $2\frac{1}{10}$ **b** $7\frac{1}{6}$ **c** $3\frac{3}{8}$ **d** $10\frac{2}{3}$

7 **a** 0·342

b 3·581



8 **a** 4·129 **b** 5·236 **c** 0·357 **d** 13·563

9 **a** > **b** >

10 **a** 1 **b** 3 **c** 9 **d** 3

11 **a** $\frac{18}{30}$ **b** $\frac{15}{36}$

12 **a** $\frac{1}{3}$ **b** $\frac{4}{5}$

13 **a** $4 \times \frac{2}{3} = \frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3} = \frac{8}{3}$ or $2\frac{2}{3}$

b $5 \times \frac{1}{7} = \frac{5}{7}$

c $7 \times \frac{1}{8} = \frac{7}{8}$

d $4 \times \frac{5}{6} = \frac{20}{6}$ or $3\frac{2}{6}$

14 **a** 50% **b** 25%

15 $\frac{12}{16}$, 75%, 4

16 **a** 5 **b** 18 **c** $100 **d** 900

17 0·863, 1·036, 1·103, 1·368

18 $1920

19 **a** $\frac{9}{24}$ **b** $\frac{12}{28}$

c $\frac{1}{3}$ **d** $\frac{2}{3}$

20 **a** $\frac{1}{2} + \frac{5}{8} = \frac{4}{8} + \frac{5}{8}$
$= \frac{9}{8}$ or $1\frac{1}{8}$

b $\frac{7}{12} + \frac{5}{6} = \frac{7}{12} + \frac{10}{12}$
$= \frac{17}{12}$ or $1\frac{5}{12}$

c $\frac{3}{4} - \frac{9}{20} = \frac{15}{20} - \frac{9}{20}$
$= \frac{6}{20}$ or $\frac{3}{10}$

d $\frac{4}{5} - \frac{7}{10} = \frac{8}{10} - \frac{7}{10}$
$= \frac{1}{10}$

21 **a** $\frac{4}{5}$ **b** $\frac{10}{7}$ or $1\frac{3}{7}$ **c** $2\frac{6}{11}$

d $\frac{7}{8}$ **e** $\frac{4}{8}$ or $\frac{1}{2}$ **f** $\frac{7}{12}$

g $\frac{3}{10}$ **h** $\frac{5}{3}$ or $1\frac{2}{3}$

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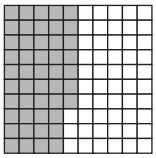
6:04 PTA Level 6, Progress test 1, Answers

(Fractions & Decimals)

1 : having difficulty
2 : developing understanding
3 : progressing well

1 Complete for the shaded part:



a fraction $\frac{47}{100}$ **b** decimal 0·47

c percentage 47%

For treatment, go to: 6:01

Also: 6:01C, 6:01E

2 Write the percentage for each fraction.

a $\frac{2}{2}$ 100 % **b** $\frac{3}{4}$ 75 % **c** $\frac{6}{10}$ 60 %

d $\frac{2}{5}$ 40 % **e** $\frac{8}{10}$ 80 % **f** $\frac{4}{5}$ 80 %

1 2 3

6:02

6:02E

3 **a** $\frac{1}{2}$ of 46 23 **b** $\frac{1}{4}$ of 44 11 **c** $\frac{1}{3}$ of 300 100

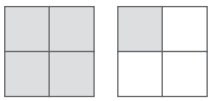
d $\frac{1}{10}$ of 400 40

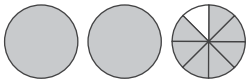
1 2 3

6:03

6:03E

4 Write as a fraction and mixed number:

a  $\frac{5}{4}$ or $1\frac{1}{4}$

b  $\frac{23}{8}$ or $2\frac{7}{8}$

1 2 3

6:03

6:03E

6:04

5 **a** $2 + \frac{8}{9}$ $2\frac{8}{9}$ **b** $9 + \frac{4}{8}$ $9\frac{1}{2}$ or $9\frac{4}{8}$

c $7 - 3\frac{1}{4}$ $3\frac{3}{4}$ **d** $5 - \frac{9}{12}$ $4\frac{3}{12}$

Also: 6:06

6 Change the improper fraction to a mixed number.

a $\frac{58}{10}$ $5\frac{8}{10}$ **b** $\frac{23}{6}$ $3\frac{5}{6}$ **c** $\frac{67}{8}$ $8\frac{3}{8}$ **d** $\frac{49}{4}$ $12\frac{1}{4}$

1 2 3

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Name: _____ Class: _____

Progress Test Record (Print this sheet to keep a record of remedial treatment.)

- The student should complete the test and then have it marked.
- Show where each error was made by placing a stroke under the question number.
- Use the worksheets listed to review the concept.
- Make the stroke into a cross when the error has been treated.
- When the review is complete, retest the questions where errors occurred.

6:04 PTR Fractions & decimals, Level 6

Question	1	2	3	4	5	6									
Errors ⁄															
Colour the worksheets completed.	6:01	6:01	6:02	6:03	6:03	6:03									
	6:01C	6:01C	6:02E	6:03E	6:03E	6:03E									
	6:01E	6:01E			6:04	6:04									
					6:06	6:06									
Retest															

Comments: _____

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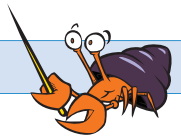
Level 6, Progress test 2, Answers

(Fractions & Decimals)



1 : having difficulty
2 : developing understanding
3 : progressing well

For treatment, go to:

1 Show the decimals on the numeral expander.

a 0·826 — 0 ones, 8 tenths, 2 hundredths, 6 thousandths

b 7·619 — 7 ones, 6 1 9 thousandths

1 2 3

6:06C

Also: 6:06E, 6:07

2 Write the decimal number for:

a eight point six two six — **8·626**

b 2 and 469 thousandths — **2·469**

c 0·5 + 0·07 + 0·009 — **0·579**

d $15\frac{363}{1000}$ — **15·363**

1 2 3

6:08

3 Use > or < to complete.

a 0·023 **<** 0·230 **b** 0·358 **<** 0·385

4 Round the decimals to the nearest whole number.

a 0·865 **1** **b** 6·06 **6** **c** 9·759 **10** **d** 4·87 **5**

1 2 3

6:10, 6:10C

6:18, 6:18E

5 Write the equivalent fraction for:

a $\frac{3}{5}$ **$\frac{27}{45}$** **b** $\frac{5}{12}$ **$\frac{25}{60}$**

1 2 3

6:11, 6:11C

6:18, 6:18E

6 Simplify.

a $\frac{30}{50}$ **$\frac{3}{5}$** **b** $\frac{20}{36}$ **$\frac{5}{9}$**

1 2 3

6:09

6:09C

7 **a** $4 \times \frac{5}{8} =$ **$\frac{5}{8}$** + **$\frac{5}{8}$** + **$\frac{5}{8}$** + **$\frac{5}{8}$** = **$\frac{20}{8}$** or **$2\frac{4}{8}$** **or $2\frac{1}{2}$**

b $4 \times \frac{1}{5} =$ **$\frac{4}{5}$** **c** $6 \times \frac{1}{7} =$ **$\frac{6}{7}$** **d** $5 \times \frac{2}{6} =$ **$\frac{10}{6}$** or **$1\frac{4}{10}$** **or $1\frac{1}{5}$**

1 2 3

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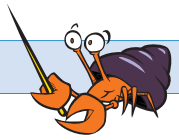
Level 6, Progress test 2, Answers

(Fractions & Decimals)



1 : having difficulty
2 : developing understanding
3 : progressing well

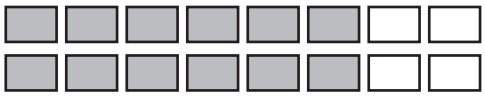
For treatment, go to:

8 Write as a percentage:

a $\frac{2}{5}$ **40%** **b** $\frac{3}{4}$ **75%**

6:12

6:13

9 

Write the fraction and percentage shaded. $\frac{12}{16}$ **75** %

75% of 16 = **12**

1 2 3

6:14, 6:15

6:14C

6:21, 6:21C

10 **a** 50% of 50 **25** **b** 20% of 300 **60**

c 25% of $200 **$50** **d** 50% of 2 600 **1 300**

1 2 3

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Name: _____ Class: _____

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- When the review is complete, retest the questions where errors occurred.

6:17 PTR Fractions & decimals, Level 6

Question	1	2	3	4	5	6	7	8	9	10					
Errors ⁄															
Colour the worksheets completed.	6:05	6:06	6:08	6:08	6:10	6:11	6:09	6:12	6:12	6:14					
		6:06E			6:10C	6:11C	6:09C	6:13	6:13	6:15					
		6:07			6:18	6:18				6:14C					
					6:18E	6:18E				6:21					
Retest															

Comments: _____

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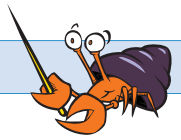
6:23 PTA Level 6, Progress test 3, Answers

(Fractions & Decimals)



1 : having difficulty
2 : developing understanding
3 : progressing well

1 Write these decimal numbers in ascending order.

2·479, 3·036, 2·742, 2·102 **2·102, 2·479, 2·742, 3·036**

2 Bob bought a lounge marked $1 800. He received a 20% discount.

How much did he pay? **$1 440**

3 Write an equivalent fraction for: **a** $\frac{2}{6}$ **$\frac{4}{12}$** Answers may vary. **b** $\frac{4}{8}$ **$\frac{8}{16}$** Answers may vary.

Simplify these fractions: **c** $\frac{8}{20}$ **$\frac{2}{5}$** **d** $\frac{12}{36}$ **$\frac{1}{3}$**

4 **a** $\frac{3}{4} + \frac{5}{8} = \frac{6}{8} + \frac{5}{8}$

$= \frac{11}{8}$ or $1\frac{3}{8}$

b $\frac{7}{12} + \frac{4}{6} = \frac{7}{12} + \frac{8}{12} = \frac{15}{12}$

$= 1\frac{3}{12}$ or $1\frac{1}{4}$

c $\frac{4}{5} - \frac{9}{25} = \frac{20}{25} - \frac{9}{25}$

$= \frac{11}{25}$

d $\frac{3}{5} - \frac{7}{15} = \frac{9}{15} - \frac{7}{15}$

$= \frac{2}{15}$

For treatment, go to:

6:23

1 2 3

6:22

6:22C

1 2 3

6:18

6:18E

1 2 3

6:19

6:20

6:21

Also:
6:19C, 6:20C
6:21C, 6:06

1 2 3

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Name: _____ Class: _____

Progress Test Record (Print this sheet to keep a record of remedial treatment.)

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- When the review is complete, retest the questions where errors occurred.

6:23 PTR Fractions & decimals, Level 6

Question	1	2	3	4											
Errors ⁄															
Colour the worksheets completed.	6:23	6:22	6:18	6:19											
		6:22C	6:18E	6:20											
				6:21											
				6:19C											
Retest															

Comments: _____

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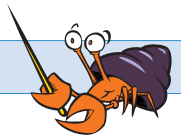
Level 6, Progress test 4, Answers

(Fractions & Decimals)



1 : having difficulty
2 : developing understanding
3 : progressing well

For treatment, go to:

6:24

6:24C

1 2 3

1 **a** $\frac{3}{9} + \frac{4}{9}$ $\frac{7}{9}$

b $\frac{2}{5} + \frac{4}{5}$ $\frac{6}{5}$ or $1\frac{1}{5}$

c $3 + \frac{9}{15} =$ $3\frac{9}{15}$

d $\frac{1}{4} + \frac{3}{8}$ $\frac{5}{8}$

e $\frac{8}{9} - \frac{6}{9}$ $\frac{2}{9}$

f $2 - \frac{6}{12} =$ $1\frac{6}{12}$ or $1\frac{1}{2}$

g $\frac{9}{20} - \frac{2}{5}$ $\frac{1}{20}$

h $4 \times \frac{3}{5}$ $\frac{12}{5}$ or $2\frac{2}{5}$

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Name: _____ Class: _____

Progress Test Record (Print this sheet to keep a record of remedial treatment.)

- The student should complete the test and then have it marked.
- Show where each error was made by placing a stroke under the question number.
- Use the worksheets listed to review the concept.
- Make the stroke into a cross when the error has been treated.
- When the review is complete, retest the questions where errors occurred.

6:25 PTR Fractions & decimals, Level 6

Question	1													
Errors ⁄														
Colour the worksheets completed.	6:24													
	6:24C													
Retest														

Comments: _____

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