

Mathematics

Unit 9: Decimals and percentages

The student's book



Cł	nec	k in							
1		4370							
		56300					50		
		i 7.3	ii	3.4	iii 5.7	1V	5.0		
2	a	$\frac{3}{5}$	b	$\frac{2}{3}$	c $1\frac{1}{2}$	($1 \frac{3}{4}$		
	e	•	f	$\frac{2}{3}$					
E)	er	cise 9A							
1	a	45000							
	b	0.000037							
	c	4300							
	d	0.508							
	e	4.7							
	f	0.0000264	1						
	g	9200							
	h	0.000456							
	i	760 000 0	00						
	j	0.24							
2	a	5							
	b	4							
	c	9							
	d	5							
	e	2							
	f	3	,						
3	a		,						
	b	4							
		0.0031							
4		49 4.1							
4					La desarro		1 .	nstead of	

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If the decimal is 0.abc If a = c then $b + c \le 9$ If a + 1 = c then $b + c \ge 9$ $a + b + c \le 18$

3-digit starting number	Palindromic result		
0.010	11.11		
0.020	22.22		
0.030	33.33		
0.040	44.44		
0.050	55.55		
0.060	66.66		
0.070	77.77		
0.080	88.88 99.99 101.101 112.211		
0.090			
0.091			
0.101			
0.111	123.321		
0.121	134.431		
0.131	145.541		
0.141	156.651		
0.151	167.761		

Answers

	178.871
0.161	189.981
0.171	202.202
0.182	213.312
0.192	224.422
0.202	235.532
0.212	246.642
0.222	257.752
0.232	
0.242	268.862
0.252	279.972
0.273	303.303
0.283	314.413
0.293	325.523
0.303	336.633
0.313	347.743
0.323	358.853
0.333	369.963
0.364	404.404
0.374	415.514
0.384	426.624
0.394	437.734
0.404	448.844
0.414	459.954
0.455	505.505
0.465	516.615
0.475	527.725
0.485	538.835
0.495	549.945
0.546	606.606
	617.716
0.556	628.826
0.566	639.936
0.576	707.707
0.637	718.817
0.647	729.927
0.657	
0.728	808.808
0.738	819.918
0.819	909.909
ercise 9B	
a 6.1 b 6.3 c 6.7	d 6.4 e 6.9
f 7.0 g 6.4 h 6.8	i 6.1
a 3.2 b 4.4 c 0.8	d 0.8 e 0.7
5.0 g 6.0 h 7.1	i 1.2
6.23 b 0.78 c 0.97	
6.11 g 4.00 h 0.03	
i 6.418 ii 6.42	iii 6.4
i 0.706 ii 0.71	iii 0.7
i 0.022 ii 0.02	iii 0.0
i 9.601 ii 9.60	iii 9.6
i 7.181 ii 7.18	iii 7.2
i 7.181 ii 7.18 i 0.314 ii 0.31	iii 0.3
i 7.181 ii 7.18	

...

the the second second b
5 a \$26.14 geo 00, they need to round up what they pay
$x = 14 \times 7 = 182.98$, they need to
to at least \$20.15
6 a 0.7459 b 0.74594 c 0.38 d 6.86
$ \begin{array}{c} 6 & \mathbf{a} & 0.7459 \\ 6 & \mathbf{a} & 0.7459 \\ 7 & \mathbf{a} & 0.17 \\ \mathbf{b} & 0.27 \\ \mathbf{c} & 0.38 \\ \mathbf{d} & 6.86 \\ \mathbf{c} & 0.38 \\ \mathbf{c} & 0.38$
8 73 ± 2.4 24.5 ± 8.19
 b i 29.19 cm² ii 29.2 cm² b i 29.19 cm² ii 29.2 cm² 10 a There will be 4 people without seats who have tickets. 10 a There will be 4 people without seats and 16 tonnes will think it
10 a There will be 4 people without seats who have will think it b Anything between 15.75 tonnes and 16 tonnes will think it b anything between the bridge when it isn't.
is safe to cross the orige
11 a 7.4 b offer 7.00 d 7.99 e 0.0
12 a 85.0 b 61.000 c 7.90 c 1.30 13 3.4499 cm, 33.81 mm, 3.35 cm
Exercise 9C 1 a 40% b 36%
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
2 a b
c
· · · · · · · · · · · · · · · · · · ·
3 a 5% is the same as $\frac{5}{100}$ b 39% is the same as $\frac{39}{100}$
c 81% is the same as $\frac{81}{100}$ d $\frac{128}{100}$ e $\frac{249}{100}$
d $\frac{0.7}{100}$ or $\frac{7}{1000}$ e $\frac{356}{100}$
5 a 15% b 25% c 17%
d 189% e 0.3%
Exercise 9D 1 a 25 b 50 c 75
1 a 25 b 50 c 75 d 70 e 35
f $\frac{225}{100}$ and 225% g $\frac{155}{100}$ and 155%
h $3\frac{35}{100} = 335\%$
2 a 60% b 80% c 55% d 60% e 6% f 220% g 282% h 220%
e 6% f 220% g 282% h 220% 3 a 40% b 20% c 70% d 80%
e 40% f 120% g 300% h 0.9%
i 245%
and the second sec

Answers

4 a $\frac{6}{10}$ b 60%	2								
5 a 13 b 65%									
6 a 70%									
b She scored the same percentage in both.									
7 a 60% b 74% c 82% d 65.5% 8 15%									
9 Earl and Eric									
	% c 48%								
d 30% e 60° 11 50%, 75%, 58%, 55°									
12 a 60% b 25									
13 a i $\frac{7}{20}$ ii 350	$\frac{3}{5}$ b i $\frac{3}{5}$	ii 60%							
c i $\frac{3}{10}$ ii 30	$\%$ d i $\frac{4}{8} = \frac{1}{2}$	ii 50%							
14 a 52% b 48	% c 20%	d 70%							
e 20%									
Exercise 9E 1 90/100, 90%; 75/10	0, 75%; 25/100, 25%	6; 3/100, 3%;							
5.8/100 = 58/1000,	5.8%; 140/100 = 2/1	000, 140%							
2 multiply by 100%	1% c 97%								
3 a 80% b 4 d 6% e 1									
	3.4%c2.5%1.75%g3.5%	d 79.6% h 143%							
i 700%									
		0.16 20/100 0.20.							
5 0.12; 8/100, 0.08;	10/100, 0.1; 16/100, 0.00, 0.1; 16/100, 00, 00, 00, 00, 00, 00, 00, 00, 00,	(0.16; 39/100, 0.39; (1000, 0.002)							
64/100, 0.64;230/1	00, 2.3; 0.2/100 = 2/	0.16; 39/100, 0.39, 1000, 0.002							
64/100, 0.64;230/1 6 b two places to th 7	00, 2.3; 0.2/100 = 2/	0.16; 39/100, 0.39; 1000, 0.002 .							
64/100, 0.64;230/1 6 b two places to th 7 Fraction	00, 2.3; 0.2/100 = 2/ ne left	1000, 0.002 .							
64/100, 0.64;230/1 6 b two places to th 7 Fraction 2 5 4	$\frac{00, 2.3; 0.2/100 = 2}{\text{Decimal}}$	%							
64/100, 0.64;230/16 b two places to th7 $ $	00, 2.3; 0.2/100 = 2/ te left 0.4	% 40%							
$64/100, 0.64;230/16 b two places to th7\frac{2}{5}\frac{4}{5}\frac{7}{10}\frac{7}{10}$	00, 2.3; 0.2/100 = 2/ e left Decimal 0.4 0.8	% 40% 80%							
$64/100, 0.64;230/1$ 6 b two places to th 7 $ \frac{2}{5} \\ \frac{4}{5} \\ \frac{7}{10} \\ \frac{3}{4} \\ \frac{13}{5} \\ \frac{13}{5} \\ \frac{13}{5} \\ \frac{10}{5} \\ \frac{13}{5} \\ \frac{10}{5} \\ $	00, 2.3; 0.2/100 = 2/ e left 0.4 0.8 0.7	% 40% 80% 70%							
$ \begin{array}{r} 64/100, 0.64;230/1 \\ 6 $	00, 2.3; 0.2/100 = 2/ e left 0.4 0.8 0.7 0.75	% 40% 80% 70% 75%							
$64/100, 0.64;230/1$ 6 b two places to th 7 $ \frac{2}{5} $ $ \frac{4}{5} $ $ \frac{7}{10} $ $ \frac{3}{4} $ $ \frac{13}{20} $ $ \frac{17}{20} $ $ \frac{6}{5} $	00, 2.3; 0.2/100 = 2/ e left 0.4 0.8 0.7 0.75 0.65	% 40% 80% 70% 75% 65%							
$64/100, 0.64;230/1$ 6 b two places to th 7 $ \frac{2}{5} $ $ \frac{4}{5} $ $ \frac{7}{10} $ $ \frac{3}{4} $ $ \frac{13}{20} $ $ \frac{17}{20} $ $ \frac{6}{25} $ $ 3 $	00, 2.3; 0.2/100 = 2/ e left 0.4 0.8 0.7 0.75 0.65 0.85	% 40% 80% 70% 75% 65% 85%							
$64/100, 0.64;230/1$ 6 b two places to th 7 $ \begin{array}{r} \hline \hline 7 \\ $	Decimal 0.4 0.8 0.7 0.75 0.65 0.85 0.24 0.065	% 40% 80% 70% 75% 65% 85% 24% 6%							
$64/100, 0.64;230/1$ 6 b two places to th 7 $ \frac{2}{5} $ $ \frac{4}{5} $ $ \frac{7}{10} $ $ \frac{3}{4} $ $ \frac{13}{20} $ $ \frac{17}{20} $ $ \frac{6}{25} $ $ 3 $	Decimal 0.4 0.4 0.8 0.7 0.75 0.65 0.85 0.24 0.24	% 40% 80% 70% 75% 65% 85% 24%							
64/100, 0.64;230/1 6 b two places to th 7 $ \begin{array}{r} \hline \hline 7 \\ \hline $	Decimal 0.4 0.8 0.7 0.65 0.85 0.24 0.06 0.04	% 40% 80% 70% 75% 65% 85% 24% 6% 4% d 0.03							
64/100, 0.64;230/1 6 b two places to th 7 $ \begin{array}{r} \hline \hline 7 \\ $	Decimal 0.4 0.8 0.7 0.75 0.65 0.85 0.24 0.065 0.24	% 40% 80% 70% 65% 85% 24% 6% 4%							
64/100, 0.64;230/1 6 b two places to th 7 $ \begin{array}{r} \hline $	Decimal 0.4 0.8 0.7 0.65 0.85 0.24 0.06 0.04	% 40% 80% 70% 65% 85% 24% 6% 4% d 0.03 h							
64/100, 0.64;230/1 6 b two places to th 7 Fraction $\frac{2}{5}$ $\frac{4}{5}$ $\frac{7}{10}$ $\frac{3}{4}$ $\frac{13}{20}$ $\frac{13}{20}$ $\frac{17}{20}$ $\frac{6}{25}$ $\frac{3}{50}$ $\frac{1}{25}$ 8 a 0.19 b 0 0 e 6.21 f 0.1 i 0.015 9 b 90\%,85\%, $\frac{36}{40}$	00, 2.3; 0.2/100 = 2/ e left 0.4 0.8 0.7 0.75 0.65 0.85 0.24 0.06 0.04 29 c 0.66 007 g 10	% 40% 80% 70% 65% 85% 24% 6% 4% d 0.03 h							
64/100, 0.64;230/1 6 b two places to th 7 $ \begin{array}{r} \hline \hline \hline $	$\begin{array}{c c} \hline \textbf{Decimal} \\ \hline \textbf{Decimal} \\ \hline \textbf{0.4} \\ \hline \textbf{0.8} \\ \hline \textbf{0.7} \\ \hline \textbf{0.75} \\ \hline \textbf{0.65} \\ \hline \textbf{0.85} \\ \hline \textbf{0.24} \\ \hline \textbf{0.06} \\ \hline \textbf{0.04} \\ \hline \textbf{29} \textbf{c} \textbf{0.66} \\ \hline \textbf{007} \textbf{g} \textbf{10} \\ \hline \textbf{2\%} \textbf{c} \frac{9}{20} \end{array}$	% 40% 80% 70% 65% 85% 24% 6% 4% d 0.03 h							
64/100, 0.64;230/1 6 b two places to th 7 Fraction $\frac{2}{5}$ $\frac{4}{5}$ $\frac{7}{10}$ $\frac{3}{4}$ $\frac{13}{20}$ $\frac{17}{20}$ $\frac{6}{25}$ $\frac{3}{50}$ $\frac{1}{25}$ 8 a 0.19 b 0 0 e 6.21 f 0.1 i 0.015 9 b 90\%,85\%, $\frac{36}{40}$ 10 a 26% b 65 d 0 d 63% e $\frac{17}{16}$	$\begin{array}{c c} \hline \textbf{Decimal} \\ \hline \textbf{Decimal} \\ \hline \textbf{0.4} \\ \hline \textbf{0.8} \\ \hline \textbf{0.7} \\ \hline \textbf{0.75} \\ \hline \textbf{0.65} \\ \hline \textbf{0.85} \\ \hline \textbf{0.24} \\ \hline \textbf{0.06} \\ \hline \textbf{0.04} \\ \hline \textbf{29} \textbf{c} \textbf{0.66} \\ \hline \textbf{007} \textbf{g} \textbf{10} \\ \hline \textbf{2\%} \textbf{c} \frac{9}{20} \end{array}$	% 40% 80% 70% 65% 85% 24% 6% 4% d 0.03 h							

1

12 a and b

E atlan	Decimal	Percentage
Fraction	0.333	33.3
1 3 3 8	0.375	37.5
- 8 - 5 - 8	0.625	62.5
8 3 16	0.1875	18.75
$\frac{16}{7}$	0.4375	43.75
16 2 3	0.6666	66.67
3 3 7	0.4285	42.86
$7 \frac{716}{18}$	7.2	720
$50\frac{1}{2}$	50.5	5050

 $0.333..., 33.3...\%; \frac{3}{8}, 37.5\%; \frac{5}{8}, 0.625; 0.1875, 18.75\%; \frac{7}{16},$ 0.4375; 0.666...; 66.6...%; 0.4285 . . ., 42.85. . .%; 7.2, 720%;

- 50 ¹/₂, 50.5%
 14 42%, ⁴³/₁₀₀, ¹¹/₂₅, ⁹/₂₀, 0.46
 15 Jane should buy the 600g cheese as it has a lower percentage of fat (34% rather than 36% for the 400g), she is doing the grant thing wrong thing.
- **16** No, she is wrong $\frac{1}{2}$ is 50% not 0.5%
- 17 82.5%, 62.5% and 102.5%

Exercise 9F

2

1

E)	(ercise Jr
1	Joshua has made the mistake as \$6.3 is the same as \$6.30, crossing off the 0's is not how to divide by 10.
	1 000000 000 000 000 000 000 000 000 00

2	a	\$5	b	12km		5			200	
		\$74	f	\$1.50	g	2	4g	h	9 children	
	i	\$30		\$1						
3	Th	nis is close	st to	method	3, di	vic	le by 100) the	n multiply.	
4		$\frac{17}{10}$		0.02			63%	d	0.3 e	273
5		\$0.93	b	\$1.14			\$1.30		\$1.02	
		\$3.75	f	\$9.66	1	g	\$0.60	h	\$0.525	
		\$6.65	j	\$0.30						
6	N	o, he has	foun	d half. 0	.5% i	is l	half of 19	% so	should be 1	.2
7	A	nya								
8	a	\$54.96	ł	5.6kg		c	43.21		d 80.5 km	
	e	2m	1	f 9.6 g						
9	5	50%								-



10 No, because 200% is the same as multiplying by 2, it should be \$100, she has found 20%

1 a	350 g chee	se		b 50	0 g cheese	c	no	
12 a	20% of 12	50		b	15% of 220			
c	0.25×90					4		
13 32	26.4 km							
14 a	108	b	1620	c	21600			
15 a	8%	b	8%; 396	5; 234	; 198; 72			
16 3	.15 tonnes							

Answers

17 a 0.2×15 **b** 5% of 36 **c** 0.02×10 **18** \$141.36, \$230.64 **19** 615 **20 a** 3 **b** 2.5 **c** 4.2 **21** True. These calculations are all equivalent: $\frac{15}{100} \times 42 = \frac{15 \times 42}{100} = 15 \times \frac{42}{100}$ and so this will always be true. **22** 15% of 324

Ex 1 2 3	a 400 b 25% is the same 3 and 729	320 as $\frac{1}{4}$ so mul	tiply by 4 to	find 100%	
4	a 4600 b	800	c 24		
	d 60 e	400	a second on	awar is 3000	
5	He has found 1		he correct an	d 230	
6		7 00	c 4	u 250	
7	a 270	b 1150			
8	Increase by <i>x</i> %	2		x% of original	amount
	15%				101.5%
	1.5%				_115%
	150%		ana anala an		1600%
	1500%				-250%
	9 a 112% 10 a 300	b 124%b 200	c 85%		

Exercise 9H		d <
1 a < b >	c >	
2 a false b true	c true	d true
3 3.4 < 3.404 < 3.41 < 3.5	< 3.501	
4 7.7 > 7.62 > 7.612 > 7.6	> 7.06	
6 a > b =	c <	d >
7 a 870 litres > 8700 ml >	> 0.87 litres > 87	ml > 0.87 ml
h $8.07 \mathrm{g} < 80.7 \mathrm{g} < 870$	g < 8.07 kg < 80	$700 \mathrm{g} < 8 \mathrm{tonnes}$
8 0.2 km > 350 cm > 2.4 m	$1 > 220 \mathrm{cm} > 300$	mm > 0.25 m
9 $1.2 \text{ cm} < 0.14 \text{ m} < 140 \text{ cm}$	m < 2400 mm < 2	$24.20 \mathrm{m} < 2.24 \mathrm{km}$
Exercise 91		
1 b $\frac{2}{3} = \frac{8}{12}; \frac{3}{4} = \frac{9}{12}$	c $\frac{3}{4}$	
2 $\frac{1}{3} = \frac{8}{24}; \frac{3}{8} = \frac{9}{24}$ so $\frac{3}{8}$ is la		
3 $\frac{2}{3} = \frac{16}{24}; \frac{5}{8} = \frac{15}{24}$ so $\frac{2}{3}$ is c		
4 $\frac{21}{48}$ (other answers are p	ossible)	
5 Students' own answers	e.g. $2\frac{11}{30}$, $2\frac{21}{60}$	
6 a $\frac{3}{4}$ b $\frac{61}{100}$	c $\frac{9}{20}$	d $2\frac{23}{50}$
7 a $\frac{3}{10}$ b $\frac{1}{20}$	c $\frac{39}{500}$	d $1\frac{5}{9}$
8 a $\frac{29}{32}$ b $\frac{4}{9}$	c $\frac{393}{1250}$	d $\frac{25}{16}$
10 0.83, $\frac{4}{5}$, $\frac{17}{20}$		
$11 \frac{1}{5}, \frac{21}{100}, \frac{1}{4}, \frac{3}{10}, \frac{7}{20}$		
12 a $\frac{24}{17}$ b 3.72	1991.2.14.1991	

	false $\frac{4}{15} < \frac{7}{20} <$	b true $\frac{3}{8} < \frac{2}{5}$	b $1\frac{1}{2}$	$\frac{7}{20} < \frac{9}{1}$	$\frac{9}{6} < \frac{8}{5} < \frac{13}{8}$	
Exe	ercise 9J			-10	d	1.4
1 :	a -4.1	b -3.2		-1.9 -2.2		-9.9
	a -1.3	b -1.2		State of the	-0.8	2.9
3	+	-2.6	-1.8	- Starter and	-3.1	0.6
	-2.3	-4.9	-4.1	A CONTRACTOR	-2.2	1.5
	-1.4	-4	-3.2	CINE CONTRACTOR	-1.4	2.3
	-0.6	-3.2	-2.4		1.5	5.2
	2.3	-0.3	A State State State State		d -17.4	S I wet
4 5 6	a -2.7 l) 0 C	5.7 d	6.3 1 -4 1 -1	ent th	f -8.7
7	a -0.6		-4.6	-1	1.7	2.4
8	-	0.1	-0.2	-2	17	-5.4
	-3	0.4	0.2	-1.		-4.9
, 2	-2.5	0.9	1.8	0		-3.4
		5.1	4.5	2.	.7 0	-0.7
	1.7	5.4	4.8	3	0.3	3 -0.4
9	a i -3 b i -3.53	ii 9 ii 9 471	iii -3 iii -1.9 nal values imates w	s are	to the intege	ers they round

Exercise 9L 1 a 0.4 b e 0.32 f i 0.41 j 2 a 1.49 b e 45.5 f 3 \$17.28 4 4.35 km/hr	0.016 g 0.75 h 0.016 0.054 0.142 c 1.801 25 d 0.1815
5 \$3.69	here we are store you have or your
6 \$5.19	
7 \$8.908 The third decir1.76	mal place is 7 so he should have rounded up to
9 a 1.05	b 11.1 c 0.15
10 0.887	
11 a 0.0123	b 0.488
Exercise 9	
1 a 4500	b 0.0002645
2 a 3	b 5
3 a 0.03	b 0.025 c 0.0255
4 a 0.896	b 0.90

Decimal	Fraction (cancelled to simplest form)	Percentage			
0.2	$\frac{1}{5}$	20			
0.25	<u>1</u> 4	25%			
0.875	<u>7</u> 8	87.5%			
0.3 (or 0.333	$\frac{1}{3}$	33.3% (to 1dp)			
0.125	<u>1</u> 8	12.5%			
0.19	<u>19</u> 100	19%			
0.75	<u>3</u> 4	75%			
0.08	2 25	8%			
0.6	<u>3</u> 5	60%			
0.7	<u>7</u> 10	70%			
11 a 380.6 c 743.4 12 a \$92 13 a 6	12.5% eas $0.3 = 30%$ i $11%$ b $80%$ b 261.8 d 2800.8 b $1540 kg$ c $23l$ b 2.3 c 5.1	d 1620 km			
14 115% 15 a 550 16 $8\frac{8}{15} < 8\frac{3}{5} < 8\frac{5}{8}$ 17 multiple answ 18 a -2.62	b 850 $< 8\frac{13}{20}$ yers b 1.709 c 14.56				
18 a 2.02 19 a 1.2	b 1.2 c 0.4	d 131.4 h 0.93			

21 a \$53.70 b \$6	5.66 c \$34.80	d \$4.90
22 \$25.50		
23 \$3.68		
24 \$44.37		
25 \$11.66	b 10, 639, 63	.9, 575.1
26 a 1, 639, 702.9		
Check out		
1 a 253000 b 0	.2164	
	3.596 c 3.5956	d 13.07
3 a 0.3 b ().06 c 2.5	a 15.07
e 9.17 f ().063	
4 a $\frac{3}{4}$ b	$\frac{4}{5}$ c $\frac{3}{10}$	
4	9	
d $2\frac{1}{4}$ e	$13\frac{17}{25}$ f $\frac{5}{200}$	
5 a 7.36 b	70.78 c 9.7	and the state of the
	17.12 c 1.9	d 4.81
6 a 43.4 b	17.12 c 1.9	
7	17.12	
0 a -5	Fraction (cancelled to	Percentage
7 Decimal	Fraction (cancelled to simplest form)	Percentage
7	Fraction (cancelled to simplest form)	Percentage 40%
7 Decimal	Fraction (cancelled to simplest form) $\frac{2}{5}$ 13	Percentage
7 Decimal 0.4 0.65	Fraction (cancelled to simplest form) $\frac{2}{5}$ $\frac{13}{20}$	Percentage 40% 65%
7 Decimal	Fraction (cancelled to simplest form) $\frac{2}{5}$ $\frac{13}{20}$ $\frac{3}{8}$	Percentage 40% 65% 37.5%
7 Decimal 0.4 0.65	Fraction (cancelled to simplest form) $\frac{2}{5}$ $\frac{13}{20}$	Percentage 40% 65%
7 Decimal 0.4 0.65 0.375 0.03	Fraction (cancelled to simplest form) $\frac{2}{5}$ $\frac{13}{20}$ $\frac{3}{8}$ $\frac{3}{100}$	Percentage 40% 65% 37.5%
7 Decimal 0.4 0.65 0.375	Fraction (cancelled to simplest form) $ \begin{array}{r} \frac{2}{5} \\ \frac{2}{5} \\ \frac{13}{20} \\ \frac{3}{8} \\ \frac{3}{100} \\ \frac{3}{50} \\ \end{array} $	Percentage 40% 65% 37.5% 3% 6%
7 Decimal 0.4 0.65 0.375 0.03	Fraction (cancelled to simplest form) $\frac{2}{5}$ $\frac{13}{20}$ $\frac{3}{8}$ $\frac{3}{100}$	Percentage 40% 65% 37.5% 3%
Decimal 0.4 0.65 0.375 0.03 0.06	Traction (cancelled to simplest form) 2 5 13 20 3 3 100 3 50 17 100	Percentage 40% 65% 37.5% 3% 6%
7 Decimal 0.4 0.65 0.65 0.375 0.03 0.03 0.06 0.17 8 a \$5 h	Fraction (cancelled to simplest form) 2/5 3/20 3/8 3/100 3/50 17/100 17/100 \$0.50 \$0.18	Percentage 40% 65% 37.5% 3% 6% 17%
Decimal 0.4 0.65 0.375 0.03 0.03 0.06 0.17 8 a \$5 9 a i $\frac{23}{100}$ i	Traction (cancelled to simplest form) 2 5 13 20 3 3 100 3 50 17 100	Percentage 40% 65% 37.5% 3% 6% 17% d \$3

The homework book answers.

Answers

8E 1 (1, -3), (1, 5), (1, 0) 2 (-4, -2), (5, -2), (0, -2), (2, -2) **3 a** 7 **b** 3 **c** 5 **d** 6 **e** 13 **f** 10 4 (5, -2) 5 (5, -2), (-11, -2) 6 possible answers: (2, 0), (2, 3), (2, 8) 7 (-1, 1) 8 (3, 2) 9A **b** 41000 **c** 5700 1 a 3600 e 930000 f 66000 d 8.5 i 0.0053 g 80 h 650000 k 0.00366 l 0.000476 **j** 0.078 n 0.5 o 0.000003 m 0.003 b 2 c 8 d 0 f 2 g 4 h 4 b 100 c 0.72 d 94 2 a 4 **h** 4 e 4 **d** 940 3 a 540000 b 100 4 34000 b < 5 a > 9B **c** 5.0 **d** 32.0 b 3.8 1 a 6.4 g 5.4 **h** 18.4 f 7.0 e 0.1 1 53.0 k 8.9 i 454.0 j 6.0 **d** 7.78 **b** 8.44 c 2.04 2 a 5.36 **g** 10.02 **h** 45.56 **f** 4.30 e 15.49 **k** 0.50 1 0.40 i 0.31 j 0.26 b 5 c 8 **d** 16 3 a 5 **h** 601 **f** 30 **g** 6 e 11 4 a 25.16 cm² **b** 25.2 cm² **5 a** 2.33 **b** 0.71 **c** 1.36 **d** 1.18 6 4.845 90 1 a 43% **b** 66% **c** 40% d 32% e 18% f 20% g The percentage is the same as the number in the diagram. h 2 a $\frac{43}{100}$ **b** $\frac{89}{100}$ c $\frac{77}{100}$ **d** $\frac{91}{100}$ 3 a 57% **b** 9% c 13% d 81% e 79%

	$\frac{3}{5} = \frac{60}{100} = 60\%$ $\frac{11}{20} = \frac{55}{100} = 55\%$			-			
		-					
с	$\frac{49}{50} = \frac{98}{100} = 98\%$		-				
d	$\frac{6}{15} = \frac{2}{5} = \frac{40}{100} = 40\%$						
	$\frac{26}{13} = \frac{13}{65} = 65$		-				
e $\frac{26}{40} = \frac{13}{20} = \frac{65}{100} = \overline{65}\%$ 2 a 20% b 75% c 90% d 85%							
e	84% f 66%	g 24%	h 75%	2			
i	95% j 60%		1 74%	E			
3 a	2	0		1			
b	i $\frac{7}{10}$ ii 709	6					
с	$i \frac{2}{5}$ ii 409	6		(million)			
	i i ¹¹ / ₂₀ ii 559	Z.					
	h = 47.5% b 62.		d 63.2% (to + c	i.p.)			
4 ε 9Ε	1 47.5% D 02.	570 € 2070	a consite (corre	87			
1	Decimal	Per cent fraction	%				
-	0.2	20 100	20%	1			
	0.09	<u>9</u> 100	9%				
	0.66	<u>66</u> 100	66%				
	0.15	15 100 4	15%				
	0.04	100	4% 70%				
	0.7 a 53% b 7%	100 % c 70%	d 39%				
3	m 5.16% n 0 8.3% = 0.083 3% = 0.03 3.8% = 0.038	8% k 2.1% 35% o 103% 80% = 0.8 380% = 3.8 8% = 0.08 820% = 8.3	l 42.42% p 123.8%				
	38% = 0.38	830% = 8.3					
	The odd one out is a 19% b		d 21%				
	a 19% b a the star-shaped dia		h digo				
	$0.64, 64.5\%, \frac{13}{20}, \frac{2}{3}$						
0		100					
0 9		16 m					
	0 12 100 0	36 cm					
9		\$90					
9	e 15 litres f g 468 g h	\$90 23 kg					
9	e 15 litres f g 468 g h i 18 km j	\$90					
9	e 15 litres f g 468 g h i 18 km j k 3 eggs l	\$90 23 kg \$21					
9 1	e 15 litres f g 468 g h i 18 km j k 3 eggs l a 20% b	\$90 23 kg \$21 663 bananas		202			
9 1 2	e 15 litres f g 468 g h i 18 km j k 3 eggs l a 20% b	\$90 23 kg \$21 663 bananas 52 banana mango	CON DESCRIPTION OF THE OWNER	ineapple			
9 1 2	e 15 litres f g 468 g h i 18 km j k 3 eggs l a 20% b Fruit Percentage	\$90 23 kg \$21 663 bananas 52 banana mango 38% 27%	18%	17%			
9 1 2	e 15 litres f g 468 g h i 18 km j k 3 eggs l a 20% b Fruit Percentage Number of	\$90 23 kg \$21 663 bananas 52 banana mango	CON DESCRIPTION OF THE OWNER				
9 1 2 3	e 15 litres f g 468 g h i 18 km j k 3 eggs l a 20% b Fruit Percentage Number of children	\$90 23 kg \$21 663 bananas 52 banana mango 38% 27%	18%	17%			
9 1 2 3	e 15 litres f g 468 g h i 18 km j k 3 eggs l a 20% b Fruit Percentage Number of	\$90 23 kg \$21 663 bananas 52 banana mango 38% 27%	18%	17%			

90	G				1.00			
1	a	300%	b	660%				
2	a	300	b	200	c	190	d	18
	e	2 000 000						
3	a	2	b	600	c	3	d	290
4	a	160	b	260	c	67.2	d	1320
5	a	250	b	150				
6	a	\$127.50			b	\$425		
	c	\$799			d	\$722.50		
	e	\$42.50			f	\$212.50		
7	\$8	340						
8	\$9	750						
9	\$8	300						
9	H_9	91						
1	a	$\frac{3}{4}$	b	$\frac{6}{7}$	с	$\frac{7}{8}$	d	$\frac{2}{3}$
						0		5
	e	$\frac{2}{5}$	f	4 9				
		3		3		17		17
2	a	$\frac{3}{10}$	b	$\frac{3}{4}$	с	$\frac{17}{20}$	d	$\frac{17}{20}$
	e	4	£	$\frac{74}{125}$				
			I	125				
3	0.8	83 and $\frac{14}{17}$						
4	2	$\frac{1}{2}, \frac{5}{8}, \frac{7}{10}, \frac{3}{4}, \frac{1}{2}$.7					
				6.1				
		false		false	с	true		
0	12	$<\frac{3}{5}<\frac{13}{20}<$	$\frac{2}{3}$					- 7

9	J							
1	a	6.7	b	7	c	9.2	d	9.9
	e	9.3	f	6.42	g	8.58	h	10.05
2	a	5.77	b	12.33	с	4.33	d	22.12
	e	173.94	f	86.962				
3	\$2	29.38						
4	3.	487 + 5.963	+	2.09				
5	a	46.37 s	b	0.66 s				
6	a	8.7, 10.6, 9	9.5		b	13.2, 13, 4	.5	
	c	1.8, 4.7, 9.	2					
7	15	5.13 km						
8	a	26.4	b			6.4		
		8.6			-	20.61		
	i	2.12	j	71.53	k	10.82	1	14.302
9	18	8.065 - 15.6	4					
10	\$2	2.76						
11	0.	58 m						
12	a	i 3	ii			1 -5		
	b	i 2.29	ii	1.03	iii	-4.358		
13	a	9.33 - 2.45	5 =	6.88				
	b	8.46 - 5.72	2 =	2.74				sodd one
	c	4.293 - 2.0	547	= 1.646			1	2:3:4
14	a	6.25	b	10.68		-5.39		-3.7
	e	7.85	f	-0.53	g	0.59	h	-5.8
91	<							
1	a	0.6	b	4.5		1.4		4.8
	e	2.4	f			0.49		0.3
	i	0.32	j			0.2	1	0.056
		0.9	b	16	c	2.1		C1 - 1
3	a	0.03	b	5	in the			R: 8:01

 4 a 0.28 c 1.29 e 25.88 g 140.4 i 302.12 k 40.45 5 a \$87.40 6 a 6 	 b 0.72 d 41.92 f 58.48 h 250 j 260.46 l 414.24 b \$30.60 b 7 	c \$39.75 c 8	
 9L 1 a 2.8 e 0.115 i 0.075 m 0.057 q 18.8 2 \$0.89 3 \$2.49 	 b 1.9 f 1.14 j 0.0087 n 0.93 r 0.0375 	 c 3.9 g 0.073 k 0.327 o 0.82 s 0.325 	 d 11.6 h 3.14 l 0.324 p 0.234 t 0.044
 4 \$3.64 5 8 kg of bana 6 a 0.132 7 a 3 	anas for \$19.6 b 4 b 4	0 c 5	