

Answers: SATs Made Simple: Fractions workbook

IDENTIFYING FRACTIONS

Page 7: Practice

- One part shaded
 - Any two of the five segments shaded
 - Any five of the eight parts shaded
 - Any six of the nine segments shaded
- $\frac{5}{6}$
 - $\frac{3}{10}$
 - $\frac{7}{12}$
 - $\frac{8}{15}$
- one half
 - one sixth
 - three sevenths
 - three eighths
 - one quarter
 - two thirds
- $\frac{1}{6}$
 - $\frac{4}{5}$
 - $\frac{1}{3}$
 - $\frac{5}{12}$
 - $\frac{3}{4}$
 - $\frac{2}{9}$

Page 8: Solve problems

- pink: $\frac{3}{20}$ white: $\frac{10}{20}$ blue: $\frac{5}{20}$ red: $\frac{2}{20}$
 - white: $\frac{1}{2}$ blue: $\frac{1}{4}$ red: $\frac{1}{10}$
 - $\frac{11}{20}$
- $\frac{7}{15}$
 - girls: $\frac{9}{18}$ or $\frac{1}{2}$ boys: $\frac{9}{18}$ or $\frac{1}{2}$
 - There are the same number of girls and boys. $\frac{1}{2}$ are girls; $\frac{1}{2}$ are boys.

EQUIVALENT FRACTIONS

Page 10: Practice

- $\frac{4}{6} = \frac{2}{3}$ $\frac{6}{10} = \frac{3}{5}$ $\frac{9}{12} = \frac{3}{4}$ $\frac{5}{15} = \frac{1}{3}$
- $\frac{4}{6} = \frac{2}{3}$
 - $\frac{9}{12} = \frac{3}{4}$
 - $\frac{14}{16} = \frac{7}{8}$
 - $\frac{6}{10} = \frac{3}{5}$
- $1\frac{1}{3}$
 - $1\frac{1}{5}$
 - $1\frac{1}{12}$
 - $1\frac{3}{4}$
- $\frac{11}{7}$
 - $\frac{13}{5}$
 - $\frac{41}{12}$
 - $\frac{27}{5}$

Page 11: Solve problems

- circles = $\frac{1}{3}$ squares = $\frac{1}{2}$ triangles = $\frac{1}{6}$
- $\frac{6}{15} = \frac{2}{5}$
 - $\frac{9}{15} = \frac{3}{5}$
- 27
- pizza: $\frac{1}{2}$ pasta: $\frac{5}{18}$ stir-fry: $\frac{5}{36}$ salad: $\frac{1}{18}$ chips: $\frac{1}{36}$

COMPARING AND ORDERING FRACTIONS

Page 13: Practice

- $\frac{6}{12}$
 - $\frac{4}{12}$
 - $\frac{3}{12}$
 - $\frac{2}{12}$
 - $\frac{8}{12}$
 - $\frac{10}{12}$
- $\frac{1}{6}$ $\frac{1}{4}$ $\frac{1}{3}$ $\frac{1}{2}$ $\frac{2}{3}$ $\frac{5}{6}$
- =
 - <
 - >
 - >
- $\frac{19}{30}$ $\frac{7}{10}$ $\frac{11}{15}$ $\frac{4}{5}$ $\frac{5}{6}$ (accept $\frac{19}{30}$ $\frac{21}{30}$ $\frac{22}{30}$ $\frac{24}{30}$ $\frac{25}{30}$)

Page 14: Solve problems

- $\frac{1}{4}$ is equivalent to $\frac{6}{24}$, which is less than $\frac{7}{24}$
- $\frac{5}{12}$
- Yellow, Green, Red, Blue
- $\frac{4}{3} = 1\frac{1}{3}$ $\frac{15}{12} = 1\frac{1}{4}$ $\frac{18}{15} = 1\frac{1}{5}$ so $\frac{4}{3}$ is the largest fraction

ADDING AND SUBTRACTING FRACTIONS

Page 16: Practice

- $\frac{5}{6}$
 - $\frac{7}{12}$
 - $\frac{3}{6}$ or $\frac{1}{2}$
 - $\frac{9}{10}$
 - $\frac{5}{8}$
 - $\frac{7}{9}$
 - $\frac{7}{8}$
 - $\frac{31}{30}$ or $1\frac{1}{30}$
 - $\frac{29}{35}$
- $\frac{1}{6}$
 - $\frac{1}{12}$
 - $\frac{1}{18}$ or $\frac{3}{54}$
 - $\frac{7}{24}$
 - $\frac{3}{6}$ or $\frac{1}{2}$
 - $\frac{4}{15}$
 - $\frac{22}{63}$
 - $\frac{41}{84}$
- $3\frac{3}{4}$
 - $1\frac{5}{14}$
 - $2\frac{1}{12}$
 - $\frac{7}{24}$
 - $1\frac{17}{18}$
 - $2\frac{11}{24}$ or $2\frac{22}{48}$
 - $\frac{19}{120}$

Page 17: Solve problems

- $\frac{3}{10}$ of the cake
- $8\frac{1}{6}$ pizzas
- $\frac{2}{9}$ are adult males ($\frac{4}{18}$ or $\frac{12}{54}$)

MULTIPLYING AND DIVIDING FRACTIONS

Page 19: Practice

- $\frac{1}{10}$
 - $\frac{1}{24}$
 - $\frac{1}{2}$
 - $\frac{1}{4}$
 - $\frac{5}{3}$ or $1\frac{2}{3}$
 - 6
 - 6
 - 60
 - 84
- $\frac{1}{4}$
 - $\frac{1}{9}$
 - $\frac{1}{8}$
 - $\frac{1}{6}$
 - $\frac{2}{7}$
 - $\frac{2}{3}$
 - $\frac{13}{20}$
 - $\frac{3}{7}$
- $\frac{2}{9}$
 - $\frac{2}{11}$
 - 500
 - $\frac{2}{3}$
 - $\frac{11}{18}$
 - 72
 - $\frac{9}{16}$
 - 120

Page 20: Solve problems

- $\frac{4}{5} \times \frac{3}{12}$ (because $\frac{3}{4} \times \frac{2}{9} = \frac{1}{6}$, and $\frac{4}{5} \times \frac{3}{12} = \frac{1}{5}$)
- 160m
- Each slice is $\frac{1}{24}$
- 135 people

FRACTION AND DECIMAL EQUIVALENCE

Page 22: Practice

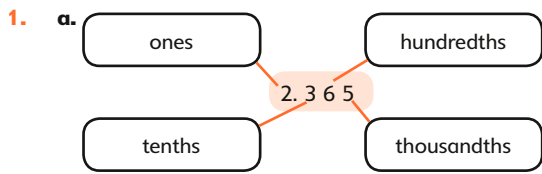
- $0.5 = \frac{1}{2}$ $0.25 = \frac{1}{4}$ $0.2 = \frac{1}{5}$ $0.01 = \frac{1}{100}$ $0.1 = \frac{1}{10}$
- $\frac{3}{4} = 0.75$ $\frac{4}{10} = 0.4$ $\frac{3}{5} = 0.6$ $\frac{1}{8} = 0.125$ $\frac{5}{100} = 0.015$
- F
 - T
 - T
 - T
 - T
 - F
- 0.8
 - 0.4
 - 0.04
 - 0.2
 - 0.25
 - 0.5
 - 2.5
 - 0.333
 - 0.666 or 0.667

Page 23: Solve problems

-
- $\frac{3}{4} > 0.7$ $\frac{2}{7} < 0.3$ $1\frac{1}{5} < 1.5$
- $7 \div 8 = 0.875$. Katrina has either done the division incorrectly or she has mixed up the tenths and the hundredths.

ROUNDING DECIMALS

Page 25: Practice



b. 2.4

2. a. 4 b. 3 c. 5 d. 1 e. 4 f. 0 g. 7 h. 5 i. 2
 3. a. 4.3 b. 8.9 c. 7.3 d. 6.4 e. 0.2 f. 12.5 g. 1.5 h. 2.7 i. 0.0
 4. a. 4.33 b. 7.94 c. 0.02 d. 1.56 e. 0.01 f. 12.46

Page 26: Solve problems

1. 3.25 12.1 3.09 5.39

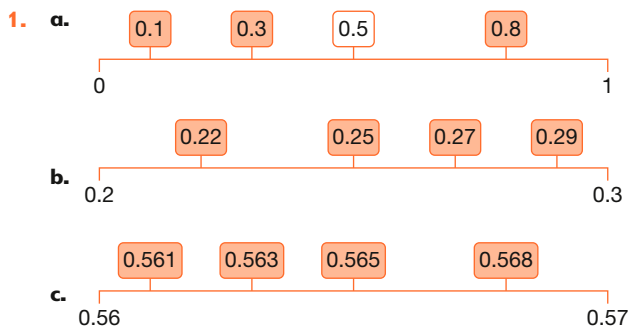
2.

To the nearest tenth	Number	To the nearest hundredth
3.8	3.752	3.75
0.1	0.067	0.07
12.2	12.245	12.25

3. a. 55p
 b. Because if she rounded them to the nearest pound they would cost nothing.

COMPARING AND ORDERING DECIMALS

Page 28: Practice



2. a. $0.308 < 0.380$ b. $0.763 > 0.736$ c. $2.075 < 2.121$
 d. $4.586 < 4.6$

Page 29: Solve problems

1. 0.129 0.192 0.219 0.291 0.912 0.921
 2. a. Any number from 0.43 to 0.441
 b. Any number from 0.306 to 0.349
 3. 0.215 **0.325** **0.435** **0.545** 0.655
 4. 123 divided by 1000 is 0.123. This is less than 0.125.

ADDING AND SUBTRACTING DECIMALS

Page 31: Practice

1. a. 0.3 b. 0.8 c. 1 d. 1.3 e. 2 f. 4.3 g. 0.63 h. 1.76 i. 0.697 j. 1.269 k. 6.4 l. 0.657
 2. a. 0.1 b. 0.3 c. 0.7 d. 1.4 e. 1.1 f. 1.7 g. 0.17 h. 0.18 i. 0.18 j. 0.121 k. 0.2 l. 0.167
 3. a. 0.99 b. 0.25 c. 0.598 d. 0.125 e. 0.105 f. 1 g. 3.927 h. 1.003 i. 0.287 j. 6.54 k. 0.82 l. 0.072

Page 32: Solve problems

1. $\begin{array}{r} \pounds 2.37 \\ + \pounds 1.85 \\ \hline \pounds 4.22 \end{array}$
 2. a. $0.387 + 0.175 = 0.562$
 b. $0.562 - 0.387 = 0.175$
 3. a. 0.088g
 b. 0.128g

MULTIPLYING AND DIVIDING DECIMALS

Page 34: Practice

1. a. 5 b. 2.5 c. 7.25 d. 52 e. 37.2 f. 8.5 g. 375 h. 507 i. 4 j. 0.6 k. 4.5 l. 72
 2. a. 0.7 b. 0.04 c. 0.0125 d. 0.16 e. 0.125 f. 3.79 g. 0.258 h. 0.756 i. 2.784 j. 4.5 k. 2.2 l. 1.125
 3. a. 15 b. 0.84 c. 0.67 d. 73.5 e. 16.2 f. 16.3 g. 0.3 h. 42.28 i. 2.5 j. 5.8 k. 2.375 l. 0.225

Page 35: Solve problems

1. 2.564×100
 2. $7.5 \times 10 = 75$ $7.5 \div 100 = 0.075$
 $7.5 \div 10 = 0.75$ $7.5 \times 1000 = 7500$
 3. 32.04g
 4. 62.1m

FRACTION, DECIMAL AND PERCENTAGE EQUIVALENCE

Page 37: Practice

1. a. 43% b. 89% c. 17% d. 52%
 e. 30% f. 8% g. 1% h. 50%
 2. a. 13% b. 25% c. 72% d. 4% e. 74% f. 55%
 g. 70% h. 68% i. 50% j. 40% k. 75% l. 62.5%
 3. Complete the equivalence chart, writing the fractions in their simplest forms.

Percentage	Decimal	Fraction
50%	0.5	$\frac{1}{2}$
25%	0.25	$\frac{1}{4}$
75%	0.75	$\frac{3}{4}$
20%	0.2	$\frac{1}{5}$
40%	0.4	$\frac{2}{5}$
60%	0.6	$\frac{3}{5}$
80%	0.8	$\frac{4}{5}$

Page 38: Solve problems

1. $\frac{6}{10}$, 0.6, 60%
 2. $\frac{4}{10}$ or $\frac{2}{5}$ or 0.4
 3. 30%
 4. If you multiply 20 by 5 you get 100, and you have to do the same thing to the numerator so 13×5 is 65. $\frac{65}{100}$ is 65%

USING PERCENTAGES

Page 40: Practice

- a. 50% b. 25% c. 10% d. 35% e. 95% f. 85%
- a. 10 b. 2 c. 12 d. 15 e. 3 f. 35
g. 40 h. 2 i. 30 j. 62
- a. 50% b. 10% c. 80% d. 50% e. 10% f. 75%
g. 75% h. 10% i. 90% j. 15%

Page 41: Solve problems

1. £400

2.

Laptop name	Usual price	Sale price
Zing-a-ling	£500	£425
Rapido	£800	£680
Boggler	£900	£765
Zippy	£1200	£1020

3. 455 school dinners, 13 go home, 182 packed lunches

PRACTICE TEST 1 – ARITHMETIC

Pages 42–43

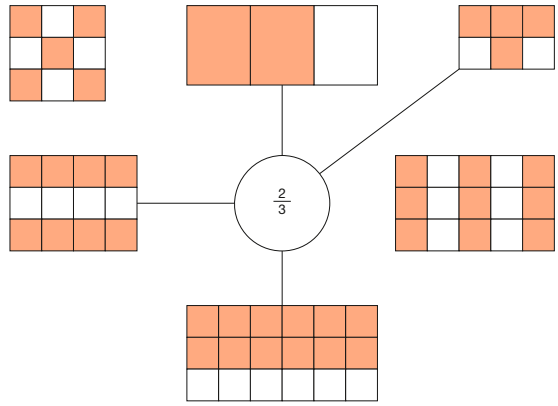
- $\frac{5}{7}$
- 2.7
- $\frac{23}{50}$
- $\frac{7}{10}$
- 9.03
- 30
- 0.075
- 11.15
- 73
- $\frac{2}{7}$ or $\frac{6}{21}$
- $\frac{11}{30}$
- 360
- $5\frac{13}{20}$
- 0.021
- 42
- $\frac{7}{12}$
- 16.25
- 270
- 160
- $\frac{13}{6}$ or $2\frac{1}{6}$

PRACTICE TEST 2 – REASONING

Pages 44–47

1. 0.163 0.316 0.361 0.613 1.630 3.016

2.



3. 1000

4. $\frac{2}{5}$

5. $\frac{7}{14} < \frac{2}{3}$ $\frac{14}{7} > \frac{3}{2}$
 $\frac{2}{7} > \frac{3}{14}$ $\frac{7}{2} < \frac{14}{3}$

6. 525 kg

(Children receive 1 mark for correct method but with one error in their calculations.)

7. 22,600 buttons

(Children receive 1 mark for correct method but with one error in their calculations.)

8. $2\frac{1}{3} + 3\frac{3}{5} = 5\frac{14}{15} = 5\frac{28}{30}$ which is greater than $5\frac{7}{10} = 5\frac{21}{30}$