Name: Date:

Key Stage 2 Maths Practice Reasoning:
Fractions and Decimals

1. Here are some shapes made of squares. A fraction of each shape is shaded.

Match each shape to its equivalent fraction.

$\frac{1}{12}$

$\frac{3}{4}$

$\frac{5}{6}$

$\frac{1}{2}$

$\frac{2}{3}$

2. Complete the following to show equivalent fractions.

$\frac{1}{4} = \frac{\quad}{12}$

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

$\frac{\quad}{3} = \frac{6}{9}$

3. Write the decimal equivalent for each fraction:

$\frac{1}{2} =$

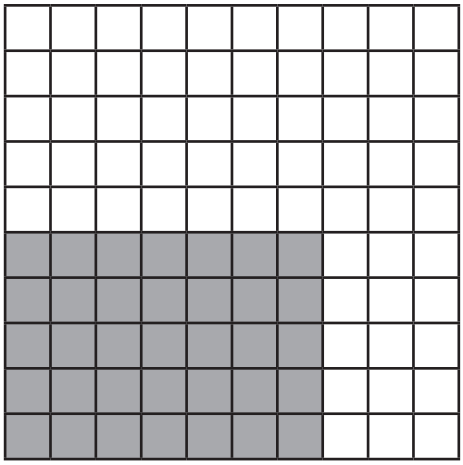
$\frac{1}{4} =$

4. Write a fraction that is equivalent to 0.75.

5. Complete the following table that matches fractions and their decimal equivalents.

$\frac{9}{10}$	
	0.47
$\frac{11}{100}$	
	0.092
$\frac{106}{1000}$	

6. Write the decimal number represented by this square and 3 possible fraction equivalents.



0.

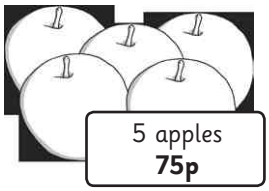
7. Use the symbols <, >, or = to complete these equations:

$\frac{2}{5}$ of 25		$\frac{1}{4}$ of 40
$\frac{1}{6}$ of 48		$\frac{2}{3}$ of 15
$\frac{1}{2}$ of 29		$\frac{7}{8}$ of 16

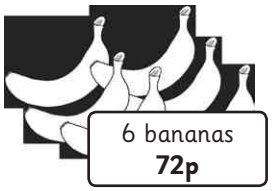
8. Cinema tickets cost £8.40 for adults and £3.20 for children. Over a year, twice as many adults buy tickets than children. The cinema decides to cut the price of the adult tickets by 25%, but increase the child tickets by 50%. If the same number of tickets are sold in the following year, will the cinema have a greater or smaller income from tickets?

9. Here are some fruits.

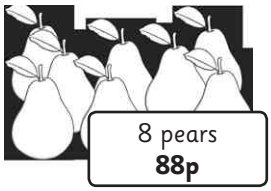
12 oranges
£1.08



5 apples
75p



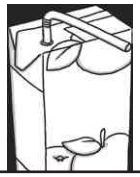
6 bananas
72p



8 pears
88p

Sama argues that the cost of 4 small oranges is more than one of each of the other fruit.
Is she correct?

10. Here are some bottled drinks. Calculate the cheapest drink per litre.



2 litre fruit drink
£1.90

500ml cola
48p

750ml lemonade
63p

1 litre orange juice
90p

orange juice:

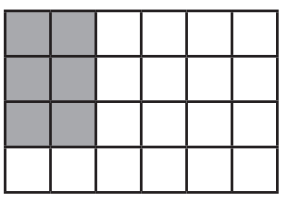
lemonade:

cola:

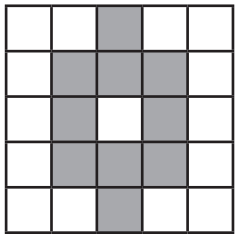
fruit drink:

cheapest drink:

11. Shade some more squares in this rectangle so that $\frac{7}{8}$ is shaded.



12. Write the fraction represented by this shaded rectangle. Write the fraction with the smallest denominator possible.



13. Order the following fractions from smallest to largest.

$\frac{1}{2}$ $\frac{3}{4}$ $\frac{7}{8}$ $\frac{3}{8}$ $\frac{5}{16}$

smallest largest

14. Order 3 of the following fractions from smallest to largest.

$\frac{2}{5}$ $\frac{3}{20}$ $\frac{3}{10}$ $\frac{1}{5}$

smallest largest

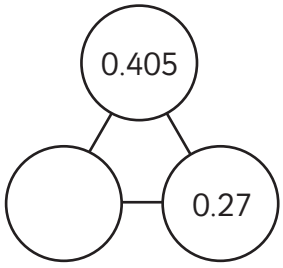
15. Which digit in this number is in the hundredths place?

0.3092

16. Write the following fraction as a decimal.

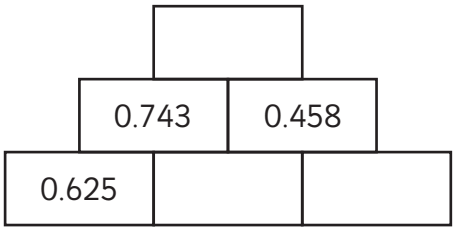
$\frac{17}{1000}$

17. The numbers in these 3 circles add up to 1.

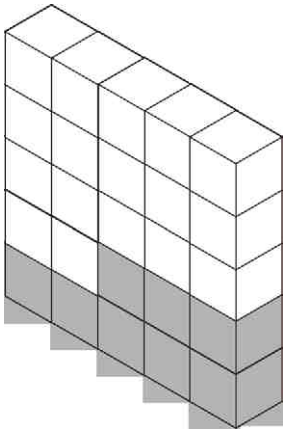


Calculate the number that will go in the final circle.

18. Here is a number pyramid. The number in a box is the sum of the two numbers below it. Write the missing numbers.



19. This model is made of 25 cubes.



What percentage of the cubes in the model are shaded?

%

20. Complete the following table to show the equivalent fractions, decimal fractions and percentages.

Fraction	Decimal Fraction	Percentage
	0.5	
		75%
$\frac{2}{3}$		
	0.7	
$\frac{3}{8}$		

21. Use the symbols <, >, or = to complete these equations:

$\frac{14}{8}$ ☐ $\frac{21}{12}$

$\frac{13}{6}$ ☐ $\frac{12}{5}$

$\frac{16}{3}$ ☐ $\frac{9}{2}$

22. Order 3 of the following fractions from largest to smallest.

$1\frac{3}{4}$ $\frac{5}{3}$ $\frac{15}{8}$ $1\frac{7}{10}$

largest smallest

23. This list of numbers is in ascending order from bottom to top. One number is in the wrong place. Circle the number that is in the wrong place.

$\frac{16}{9}$

$\frac{17}{10}$

$\frac{5}{3}$

$\frac{23}{12}$

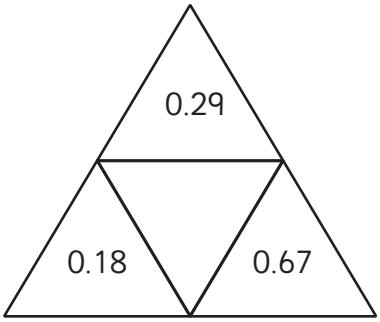
$\frac{13}{8}$

24. Continue this sequence to find the decimal numbers in the marked boxes.

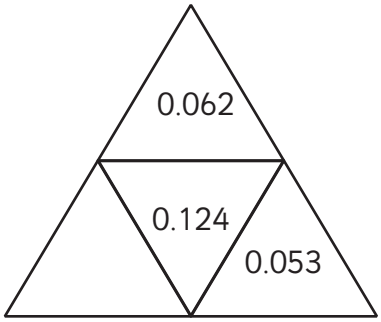
0.03	0.04	0.05	0.06
0.12	0.13	0.14	0.15

25. Complete the triangles so that the number in the centre is the sum of the numbers on the outside.

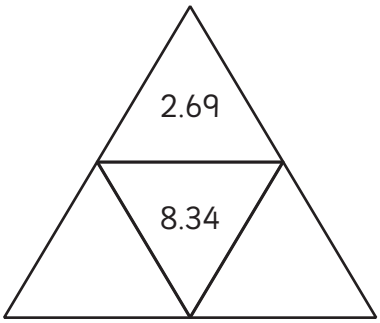
a)



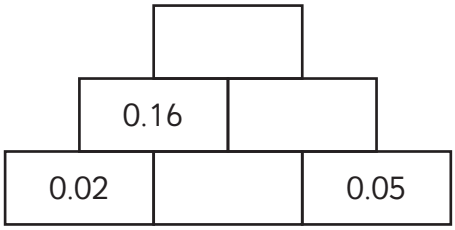
b)



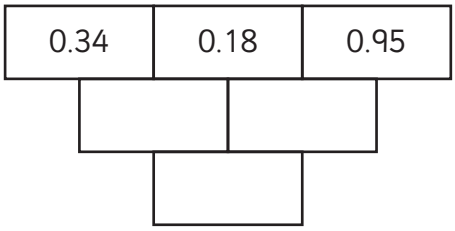
c)



26. Here is a number pyramid. The number in a box is the product of the two numbers below it. Write the missing numbers.



27. Here is a number pyramid. The number in a box is the difference of the two numbers above it. Write the missing numbers.



28. Round the following numbers to 1 decimal place.

a) 0.34 =

b) 1.98 =

c) 4.55 =

29. 1g of gold costs £24.37. A ring is made of 150g of gold. How much will the gold for the ring cost?

30. A tourist wants to change £80 into US dollars.

The rate is £1 buys $1.4892 dollars.

How many dollars will the tourist buy?

Round your answer to the nearest cent.

Answer Sheet: Key Stage 2 Maths Practice Reasoning:
Fractions and Decimals

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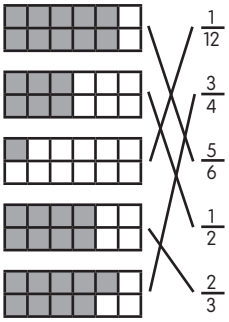
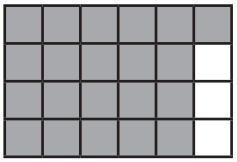
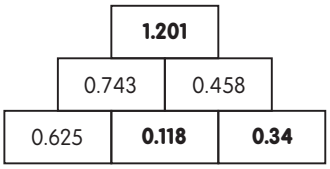
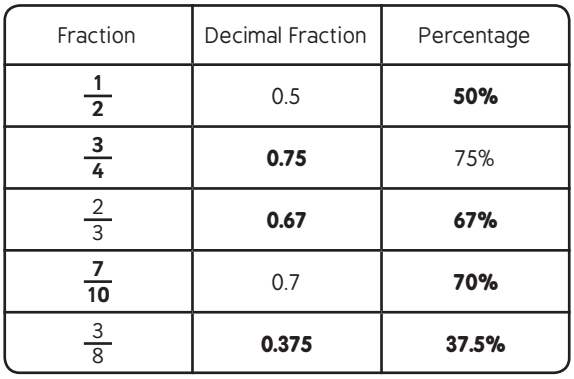
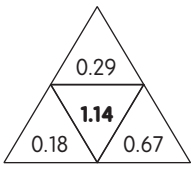
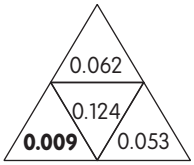
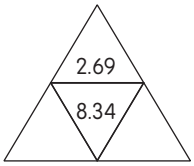
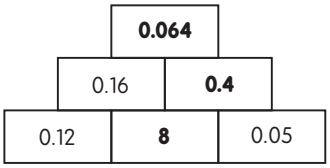
question	answer	notes
1		
2	$\frac{1}{4} = \frac{3}{12}$ $\frac{2}{5} = \frac{6}{15}$ $\frac{2}{3} = \frac{6}{9}$	
3	$\frac{1}{2} = 0.5$ $\frac{1}{4} = 0.25$	
4	$\frac{3}{4}$	
5	$\frac{9}{10}$ **0.9** $\frac{47}{100}$ 0.47 $\frac{11}{100}$ **0.11** $\frac{92}{1000}$ 0.092 $\frac{106}{1000}$ **0.106**	
6	$\frac{7}{20}$ $\frac{14}{40}$ $\frac{21}{60}$ $\frac{28}{80}$ or $\frac{35}{100}$ and 0.35	
7	$\frac{2}{5}$ of 25 **=** $\frac{1}{4}$ of 40 $\frac{1}{6}$ of 48 **<** $\frac{2}{3}$ of 15 $\frac{1}{2}$ of 29 **>** $\frac{7}{8}$ of 16	
8	**Smaller income in year 2.** (Year 1: 2 adult + 1 child = £16.80 + £3.20 = £20 New prices: Adult £8.40 - £2.10 (25%) = £6.30. Child £3.20 + £1.60 = £4.80 Year 2: 2 adults + 1 child = £12.60 + £4.80 = £17.40)	
9	**No** 4 small oranges = 36p. Apple (15p) + Banana (12p) + Pear (11p) = 38p	
10	orange juice 90p, **lemonade 84p**, cola 96p, fruit drink 95p	
11		

question	answer	notes
12	$\frac{10}{25} = \frac{2}{5}$	
13	$\frac{5}{16}$ $\frac{3}{8}$ $\frac{1}{2}$ $\frac{3}{4}$ $\frac{7}{8}$	
14	$\frac{3}{20}$ $\frac{1}{5}$ $\frac{3}{10}$ $\frac{2}{5}$ (any 3 in order)	
15	0	
16	0.017	
17	0.325	
18		
19	32%	
20		
21	$\frac{14}{8}$ = $\frac{21}{12}$ $\frac{13}{6}$ < $\frac{12}{5}$ $\frac{16}{3}$ > $\frac{9}{2}$	
22	Any of the 3 following: $\frac{5}{3}$ $1\frac{7}{10}$ $1\frac{3}{4}$ $\frac{15}{8}$	
23	$\frac{23}{12}$ should be at the top	
24	0.51, 0.39, 0.32	
25a		

Fraction	Decimal Fraction	Percentage
$\frac{1}{2}$	0.5	**50%**
$\frac{3}{4}$	**0.75**	75%
$\frac{2}{3}$	**0.67**	**67%**
$\frac{7}{10}$	0.7	**70%**
$\frac{3}{8}$	**0.375**	**37.5%**

question	answer	notes
b		
c	 any two answers that add up to 5.65	
26		
27		
28a	0.3	
b	2	
c	4.6	
29	£3655.50	
30	**$119.14** (80 x 1.4892 = 119.136)	