Fractions

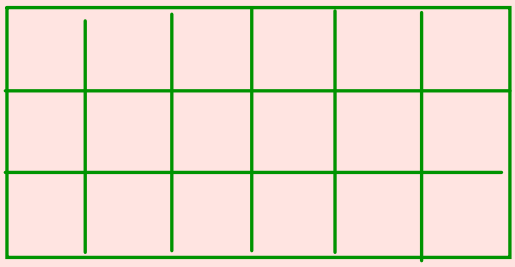
You will need 18 multilink cubes

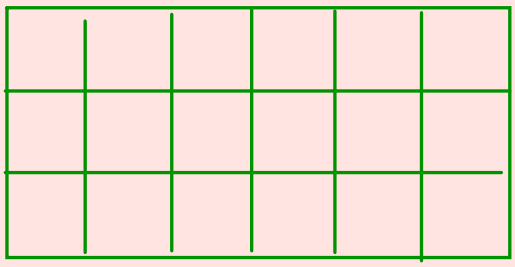
Divide the cubes in half...

Fractions

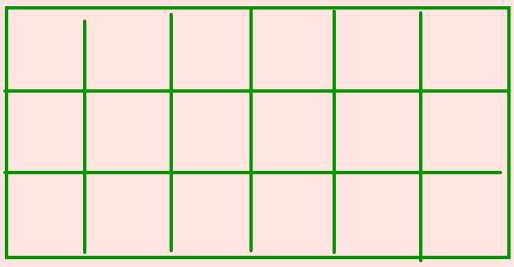
Draw 6 rectangles 3cm x 6cm

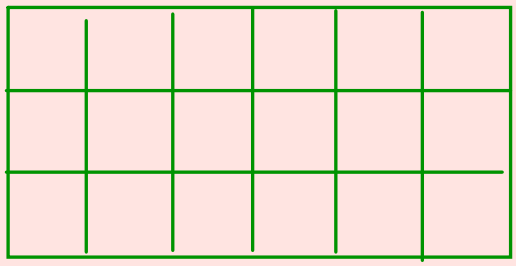
Shade one half



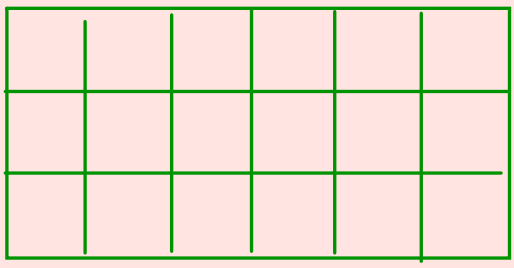


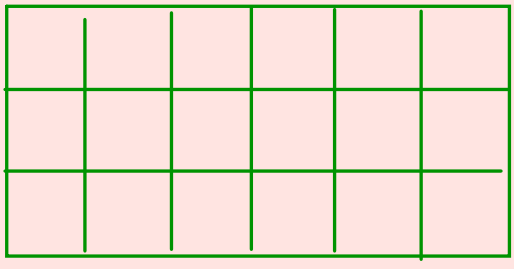
shade two thirds





shade one sixths





Draw 6 rectangles 3x4 squares

$\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{3}$ $\frac{1}{12}$

$\frac{1}{6}$ $\frac{5}{12}$

In order:

$\frac{1}{12}, \frac{1}{6}, \frac{1}{4}, \frac{1}{3}, \frac{5}{12}, \frac{1}{2}$

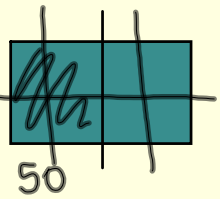
$\frac{1}{3}$ $\frac{1}{6}$ $\frac{1}{12}$ $\frac{1}{4}$ $\frac{5}{12}$ $\frac{1}{2}$

Put these 6 fractions in order starting with the smallest:

Equivalent Fractions

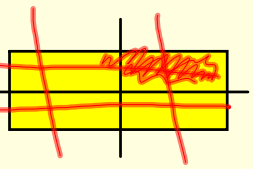
$\frac{5}{10}$ $\frac{25}{50}$ $\frac{6}{12}$

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



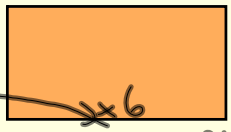
$\frac{26}{10}$ $\frac{12}{24}$ $\frac{50}{100}$

$\frac{4}{16} = \frac{2}{8} = \frac{1}{4} = \frac{10}{40}$ (×2, ×2)



$\frac{90}{360}$ $\frac{40}{160}$ $\frac{360}{1040}$ $= \frac{3}{12} = \frac{5}{20}$ $\frac{110}{440}$

$\frac{3}{4}$



$\frac{3}{4} = \frac{6}{8} = \frac{9}{12} = \frac{12}{16} = \frac{15}{20} = \frac{18}{24} = \frac{21}{28}$ (×6)

p 344 Ex 2 and 3 (×6) $\frac{24}{32}$

$\frac{1}{5}$

$\frac{1}{7}$

$\frac{3}{7}$

Equivalent fractions

Copy and complete:

1) $\frac{1}{8} = \frac{\quad}{16}$

2) $\frac{1}{5} = \frac{\quad}{15}$

3) $\frac{3}{8} = \frac{\quad}{16}$

4) $\frac{2}{7} = \frac{4}{\quad}$

game

Equivalent Fractions Worksheet

$\frac{1}{4} = \frac{\quad}{12}$	$\frac{5}{8} = \frac{\quad}{24}$	$\frac{3}{10} = \frac{\quad}{20}$	$\frac{3}{15} = \frac{\quad}{5}$	$\frac{32}{36} = \frac{\quad}{9}$	$\frac{28}{36} = \frac{\quad}{9}$
$\frac{3}{8} = \frac{\quad}{32}$	$\frac{2}{5} = \frac{\quad}{20}$	$\frac{8}{20} = \frac{\quad}{5}$	$\frac{1}{4} = \frac{\quad}{8}$	$\frac{6}{27} = \frac{\quad}{9}$	$\frac{9}{24} = \frac{\quad}{8}$
$\frac{4}{9} = \frac{\quad}{18}$	$\frac{3}{18} = \frac{\quad}{6}$	$\frac{28}{36} = \frac{\quad}{9}$	$\frac{4}{10} = \frac{\quad}{5}$	$\frac{6}{14} = \frac{\quad}{7}$	$\frac{4}{8} = \frac{\quad}{2}$
$\frac{2}{10} = \frac{\quad}{5}$	$\frac{2}{9} = \frac{\quad}{18}$	$\frac{3}{6} = \frac{\quad}{2}$	$\frac{1}{8} = \frac{\quad}{16}$	$\frac{3}{5} = \frac{\quad}{15}$	$\frac{4}{7} = \frac{\quad}{28}$
$\frac{2}{3} = \frac{\quad}{6}$	$\frac{12}{21} = \frac{\quad}{7}$	$\frac{12}{32} = \frac{\quad}{8}$	$\frac{9}{15} = \frac{\quad}{5}$	$\frac{8}{10} = \frac{\quad}{5}$	$\frac{6}{10} = \frac{\quad}{5}$
$\frac{9}{12} = \frac{\quad}{4}$	$\frac{28}{36} = \frac{\quad}{9}$	$\frac{20}{24} = \frac{\quad}{6}$	$\frac{10}{14} = \frac{\quad}{7}$	$\frac{1}{7} = \frac{\quad}{28}$	$\frac{4}{40} = \frac{\quad}{10}$

Cancelling Fractions

$$\frac{4}{12}$$

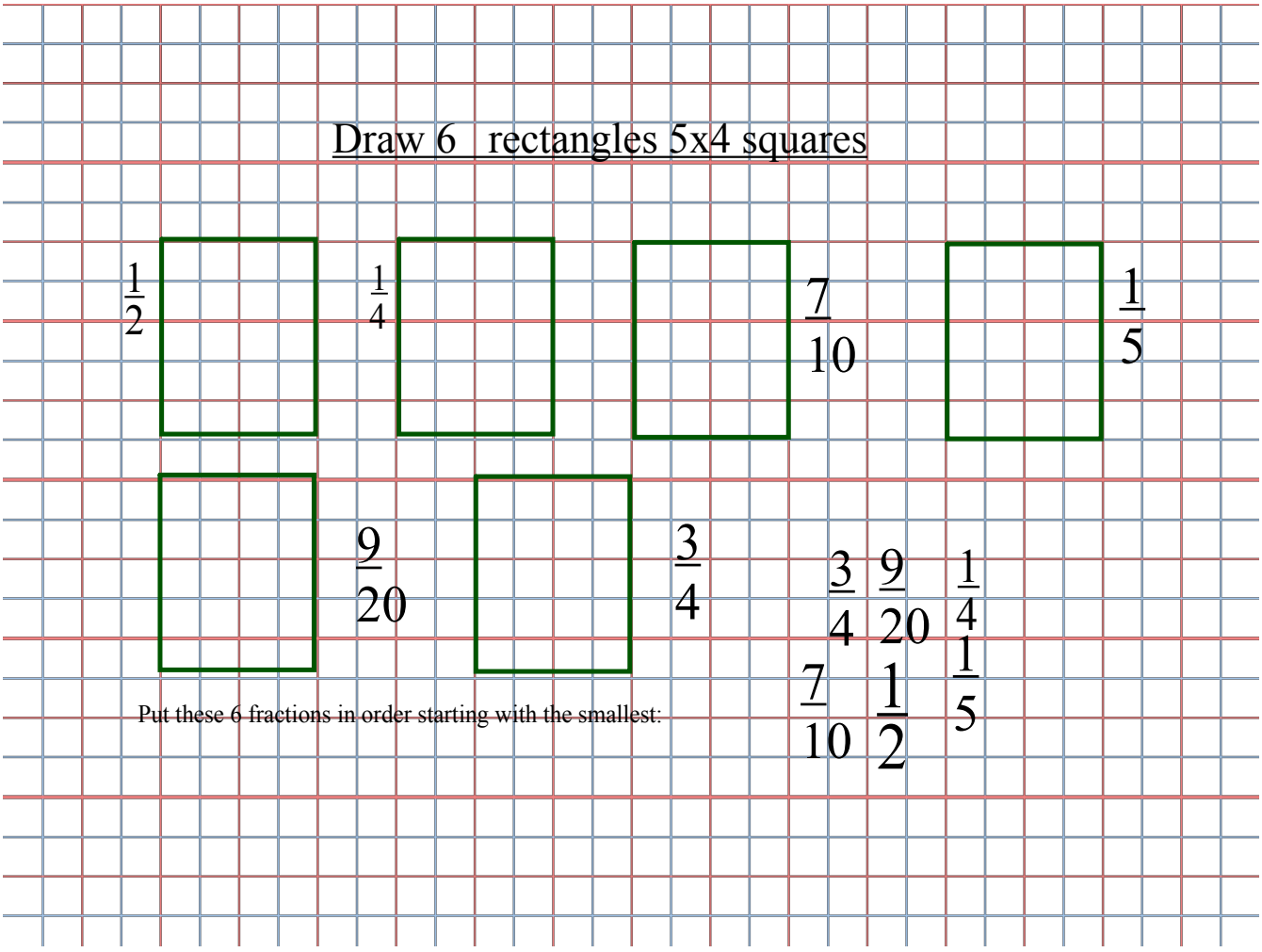
$$\frac{24}{100}$$

Cancel these fractions to their lowest terms

$\frac{10}{40}$ $\frac{5}{15}$ $\frac{40}{90}$

$\frac{2}{4}$ $\frac{6}{9}$ $\frac{12}{60}$

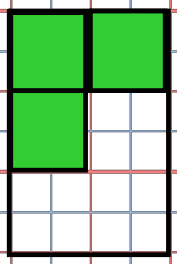
Draw 6 rectangles 5x4 squares



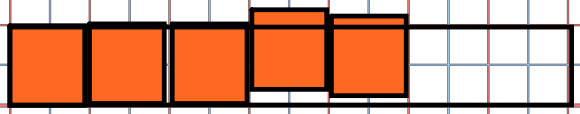
Put these 6 fractions in order starting with the smallest:

$\frac{3}{4}$ $\frac{9}{20}$ $\frac{1}{4}$ $\frac{7}{10}$ $\frac{1}{2}$ $\frac{1}{5}$

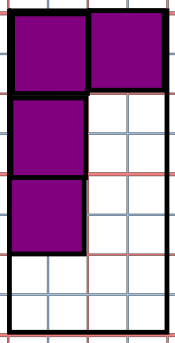
Adding fractions



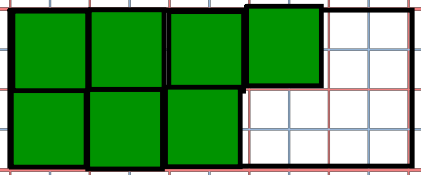
$\frac{2}{6} + \frac{1}{6} = \frac{3}{6}$



$\frac{3}{7} + \frac{2}{7} = \frac{5}{7}$



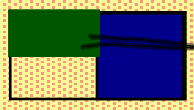
$\frac{3}{8} + \frac{1}{8} = \frac{4}{8}$



subtracting

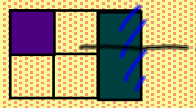
page 354 ex 18

Adding fractions with different denominators.

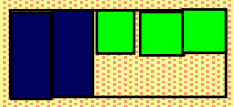


$\frac{1}{4} + \frac{1}{8}$

$\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$



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



$\frac{2}{5} + \frac{3}{10}$

$\frac{4}{10} + \frac{3}{10} = \frac{7}{10}$

$\frac{4}{5} + \frac{1}{10} = \frac{8}{10} + \frac{1}{10} = \frac{9}{10}$

$\frac{4}{7} + \frac{3}{21} = \frac{12}{21} + \frac{3}{21} = \frac{15}{21}$

$\frac{2}{5} - \frac{1}{10} = \frac{4}{10} - \frac{1}{10} = \frac{3}{10}$

$\frac{4}{9} - \frac{1}{3}$

$\frac{1}{2} + \frac{1}{3}$

$\frac{5}{6} - \frac{1}{4}$

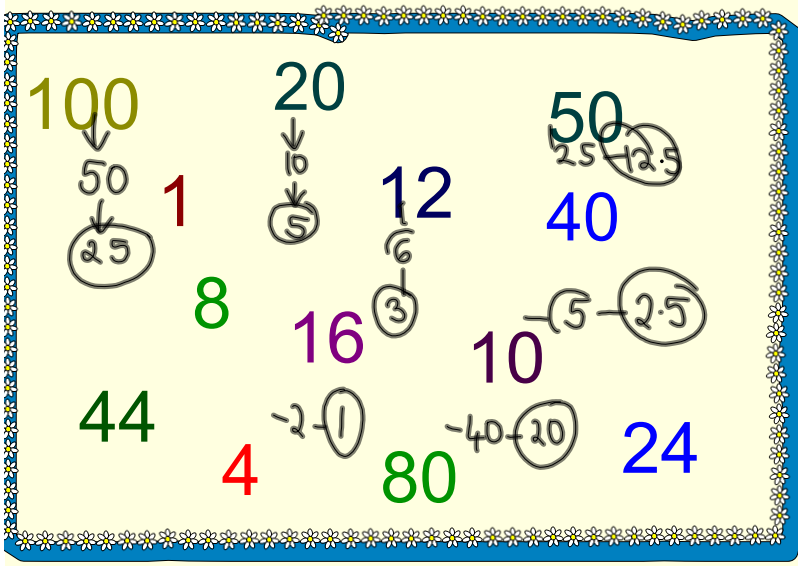
$\frac{2}{3} + \frac{2}{15}$

Worksheet page 355 ex 19,20

Finding a quarter of an amount

Split it in two and in two again!

Halve it and halve it again



How would you find $\frac{1}{3}$?

Find $\frac{3}{4}$ of 20

Page 351 Ex 12
page 196 Qu 1

Finding a fraction of an amount

$\frac{1}{3}$ of 9 = 3 $\frac{1}{3}$ of 30 = 10

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

$\frac{1}{5}$ of 10 = 2 $\frac{1}{5}$ of 50 = 10

$\frac{1}{5}$ of 30 = 6 $\frac{1}{5}$ of 500 = 100

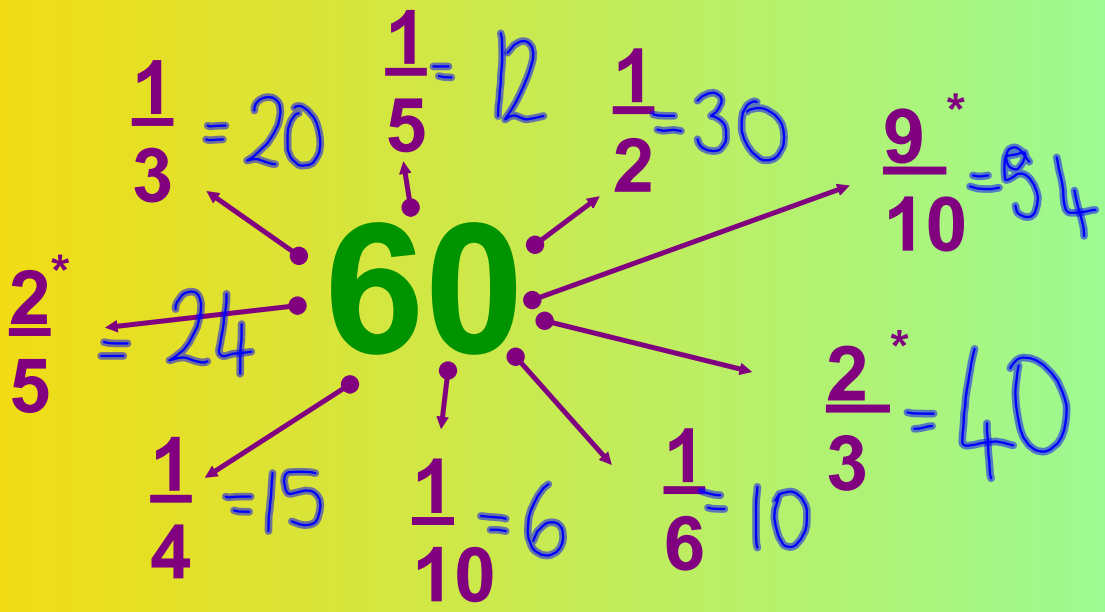
$\frac{1}{5}$ of 205 = 41

$$5\overline{)205}\quad 41$$

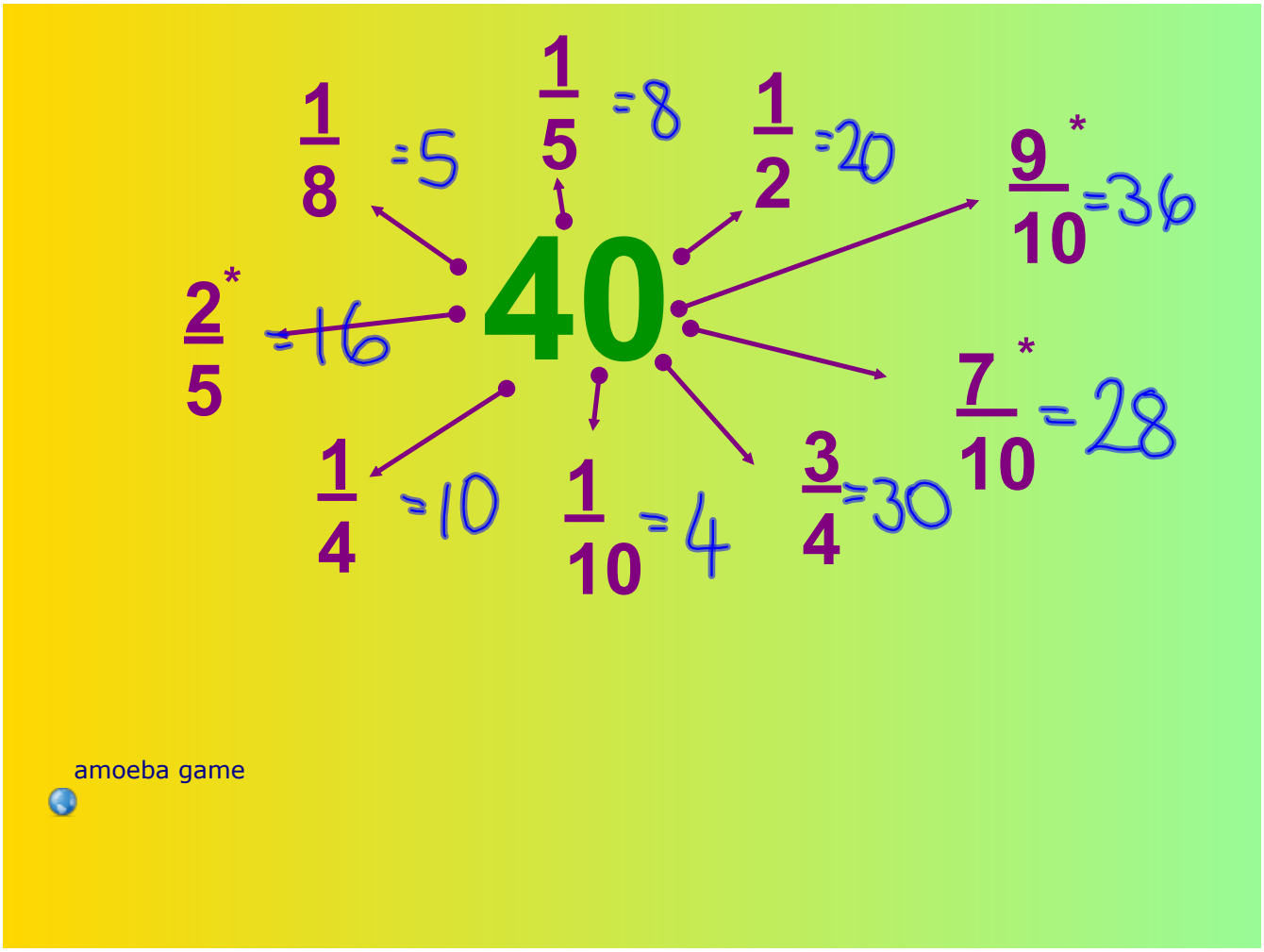
$\frac{1}{5}$ of 175 = 35

$$5\overline{)175}\quad 35$$

Finding a fraction of an amount



amoeba game


40
1/5 =8
1/8 =5
1/2 =20
9/10 =36
2/5 =16
7/10 =28
1/4 =10
1/10 =4
3/4 =30
amoeba game

1. $\frac{1}{2}$ of 42 = 21

2. $\frac{1}{4}$ of 100 = 25

3. $\frac{1}{3}$ of 21 = 7

4. $\frac{1}{5}$ of 30 = 6

5. $\frac{1}{6}$ of 18 = 3

$\frac{2}{6}$ of 18 = 6

6. $\frac{1}{10}$ of 120 = 12

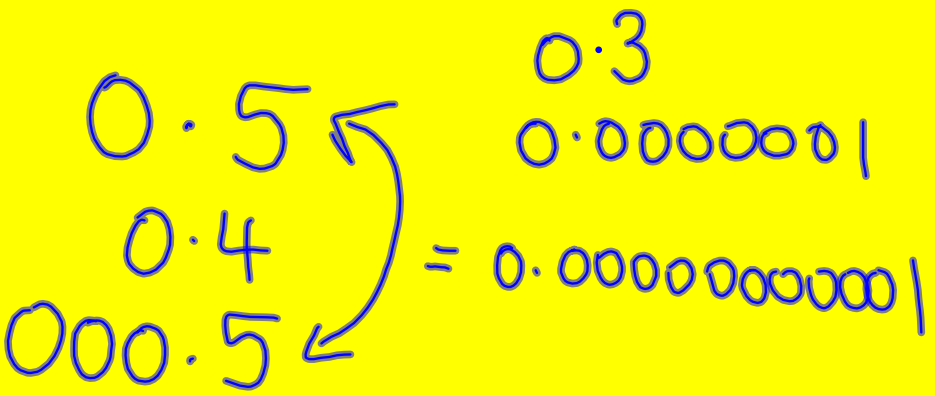
7. $\frac{3}{4}$ of 100 = 75

8. $\frac{2}{3}$ of 21 = 14

9. $\frac{3}{5}$ of 30 = 18

10. $\frac{5}{6}$ of 18 = 15

What's the smallest number you know?



Give a number between:

2 and 10

8 and 10

9 and 10

9.00 and 10

9.0005 and 10

Find a number between

6.3

6 and 6.4

7.14

7.12 and 7.15

12.03

12.02 and 12.1

9.8 and 9.86

9.85

7.87

7.84 and 7.9

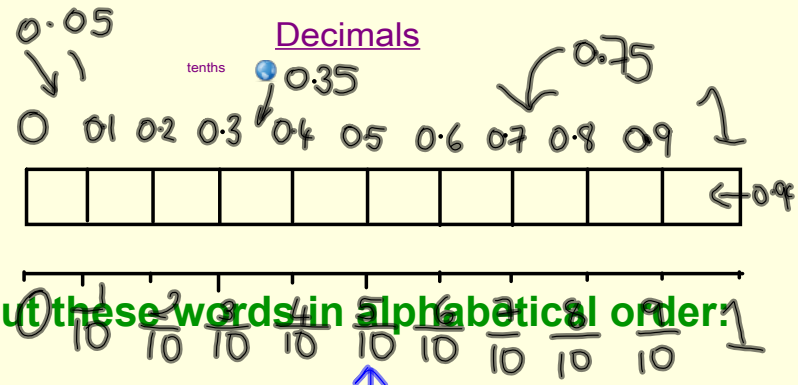
7361

73.6 and 73.7

13.94

13.93 and 14

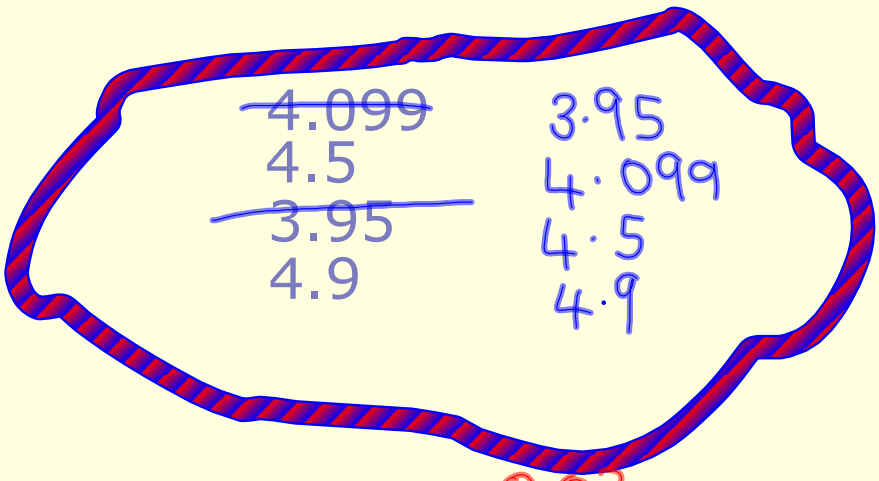
3.49 and 3.5 3.49001

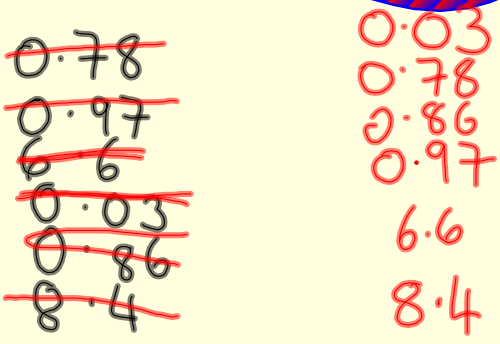


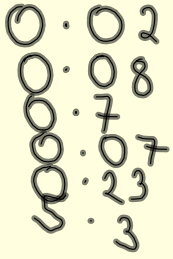
Put these words in alphabetical order:

ant anna abba antelope and sea

ordering decimals





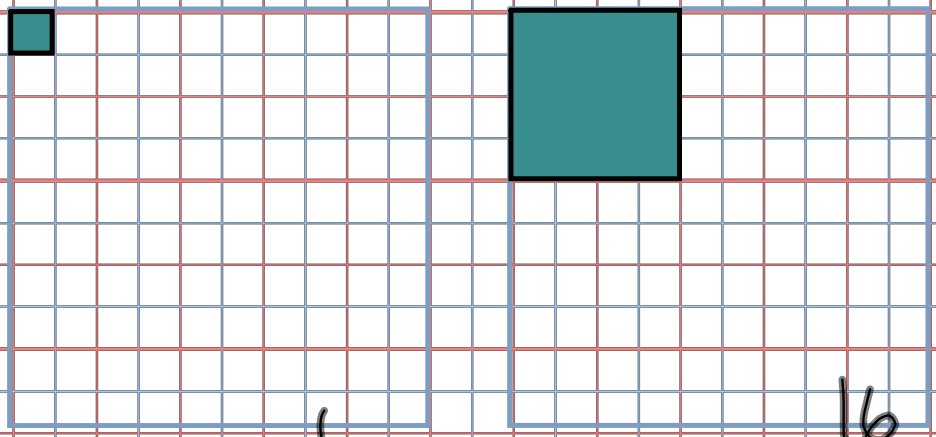


http://www.decimalsquares.com/dsGames/games/darts.html

http://www.decimalsquares.com/dsGames/games/beatclock.html

http://www.decimalsquares.com/dsGames/games/tugowar.html

Percentages



Fraction: $\frac{1}{100}$
Decimal: 0.01
Percentage: 1%

Fraction: $\frac{16}{100}$
Decimal: 0.16
Percentage: 16%

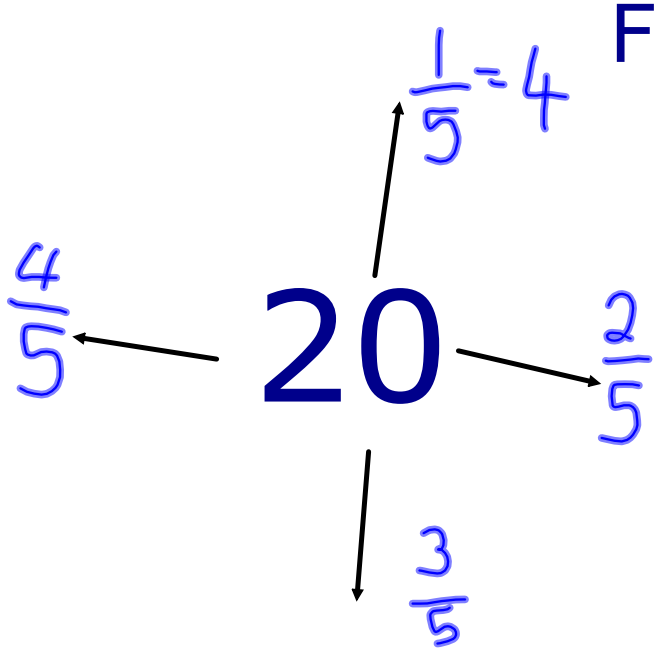
Percent means "out of 100"

main part2 ordering decimals

decimal sequences

Homework

For Friday



Find $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$, $\frac{4}{5}$ of 20, 35, 100

Find $\frac{1}{3}$ and $\frac{2}{3}$ of 30, 36 and 60

Percentages

$\frac{3}{100} = 3\%$ $\frac{61}{100} = 61\%$

$\frac{23}{100} = 23\%$ $\frac{7}{50} = \frac{14}{100} = 14\%$

$\frac{1}{50} = \frac{2}{100} = 2\%$ $\frac{1}{2} = \frac{50}{100}$ 50%

$\frac{7}{10} = \frac{70}{100} = 70\%$ (×10)

see p184

Match the decimal, percentage and fraction

0.01	1%	$\frac{1}{100}$
0.42	42%	$\frac{21}{50}$
0.25	25%	$\frac{1}{4}$
0.1	10%	$\frac{1}{10}$
0.5	50%	$\frac{1}{2}$

equiv. cards

Find 50% of

22 → 11

60 → 30
10 → 5

102 → 51

70 → 35

50 → 25

30 → 15
20 → 10
10 → 5

45 → 22.5

20 → 10

Find 25% of

22

80 → 40 → 20

102 → 51 → 25.5

44 → 22 → 11

30 → 15 → 7.5
10 → 5 → 2.5

50 → 25 → 12.5

20 → 10 → 5

Find 10% of

22 → 2.2

102 → 10.2

70 → 7

50 → 5

30 → 3

45 → 4.5

20 → 2

Attachments

Adding & Subtracting Fractions.doc