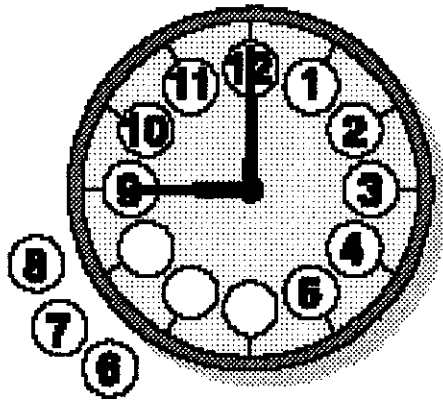
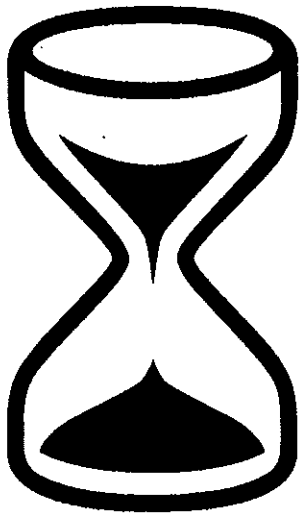
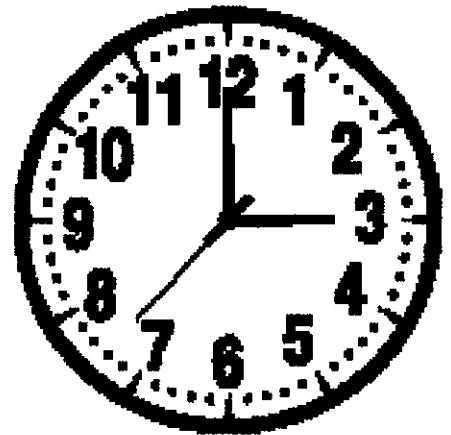
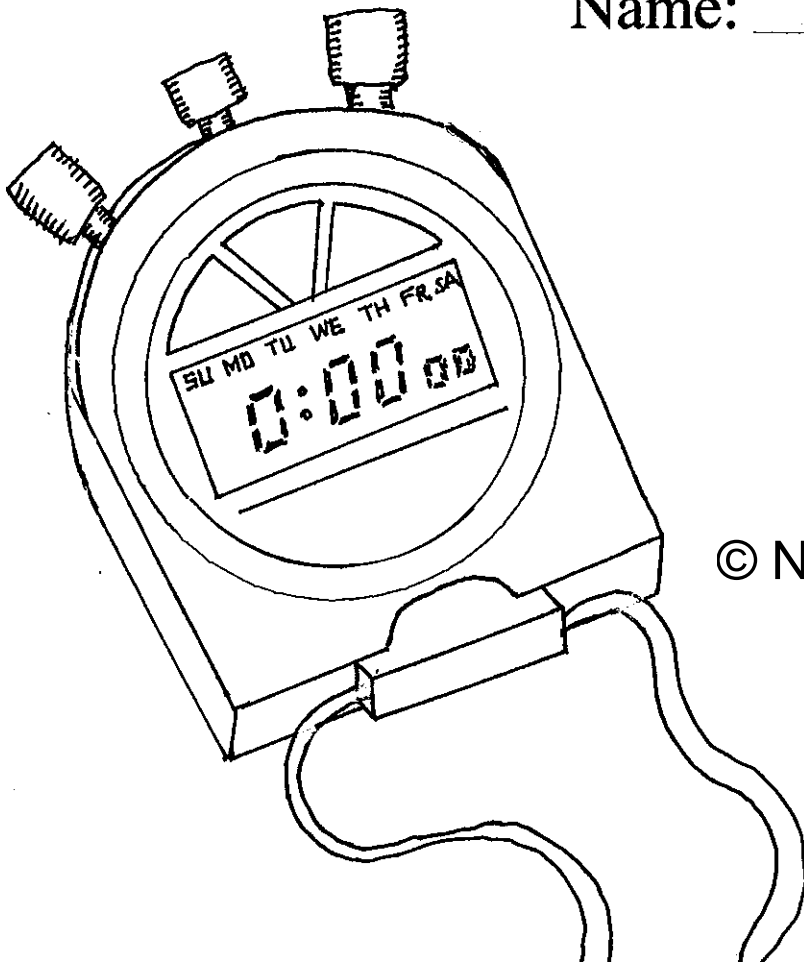


Maths



Name: _____



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Breaking down (cancelling) Fractions

① Break the down :

$$\frac{10^{\cancel{2}}}{20^{\cancel{2}}} =$$

$$\frac{4}{8} =$$

$$\frac{9}{12} =$$

② Write each fraction in lowest terms to complete the dominoes.

START	$\frac{2}{4}$		$\frac{4}{18}$		$\frac{16}{20}$		$\frac{9}{12}$		$\frac{6}{14}$		$\frac{10}{20}$
-------	---------------	--	----------------	--	-----------------	--	----------------	--	----------------	--	-----------------

	$\frac{18}{20}$		$\frac{9}{27}$		$\frac{14}{21}$		$\frac{21}{24}$		$\frac{9}{24}$		$\frac{4}{18}$
--	-----------------	--	----------------	--	-----------------	--	-----------------	--	----------------	--	----------------

$\frac{3}{12}$											
----------------	--	--	--	--	--	--	--	--	--	--	--

--	--	--	--	--	--	--	--	--	--	--	--

$\frac{10}{12}$		$\frac{14}{16}$		$\frac{2}{6}$		$\frac{18}{24}$		$\frac{15}{20}$		$\frac{8}{10}$
-----------------	--	-----------------	--	---------------	--	-----------------	--	-----------------	--	----------------

$\frac{6}{12}$		$\frac{12}{16}$		$\frac{6}{15}$		$\frac{3}{9}$		$\frac{5}{30}$		$\frac{9}{18}$
----------------	--	-----------------	--	----------------	--	---------------	--	----------------	--	----------------

--	--	--	--	--	--	--	--	--	--	--

$\frac{4}{6}$		$\frac{5}{10}$		$\frac{6}{8}$		$\frac{12}{21}$		$\frac{14}{8}$		$\frac{10}{4}$
---------------	--	----------------	--	---------------	--	-----------------	--	----------------	--	----------------

	$\frac{10}{20}$		$\frac{4}{24}$		$\frac{12}{16}$		$\frac{12}{36}$		$\frac{4}{12}$
--	-----------------	--	----------------	--	-----------------	--	-----------------	--	----------------

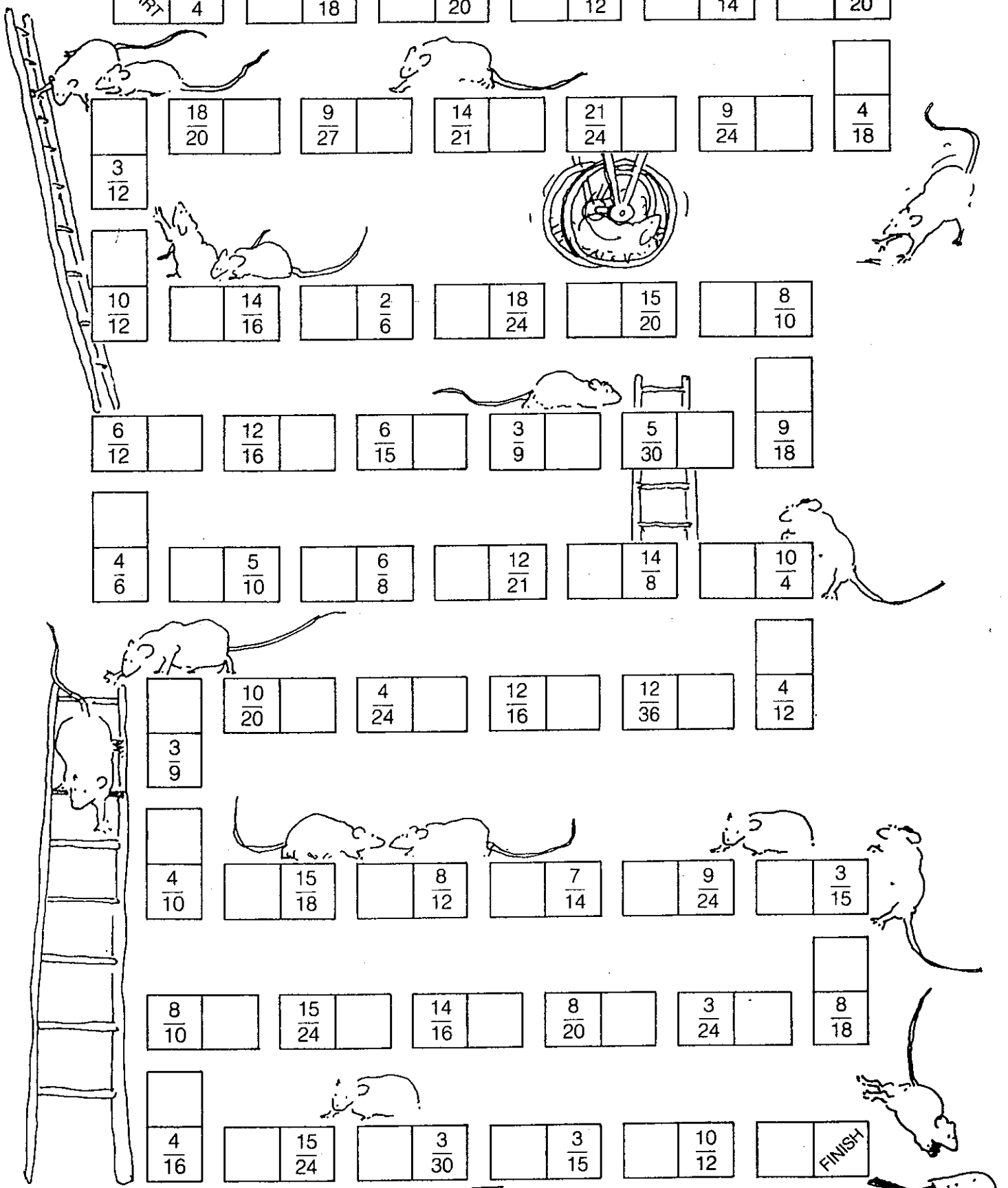
$\frac{3}{9}$										
---------------	--	--	--	--	--	--	--	--	--	--

		$\frac{15}{18}$		$\frac{8}{12}$		$\frac{7}{14}$		$\frac{9}{24}$		$\frac{3}{15}$
--	--	-----------------	--	----------------	--	----------------	--	----------------	--	----------------

$\frac{8}{10}$		$\frac{15}{24}$		$\frac{14}{16}$		$\frac{8}{20}$		$\frac{3}{24}$		$\frac{8}{18}$
----------------	--	-----------------	--	-----------------	--	----------------	--	----------------	--	----------------

--	--	--	--	--	--	--	--	--	--	--

$\frac{4}{16}$		$\frac{15}{24}$		$\frac{3}{30}$		$\frac{3}{15}$		$\frac{10}{12}$		FINISH
----------------	--	-----------------	--	----------------	--	----------------	--	-----------------	--	--------



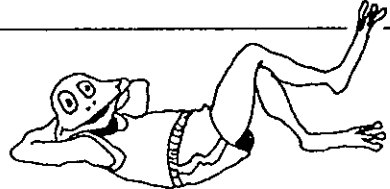
① In each set, ring the fractions which are not in lowest terms. Rewrite those fractions in lowest terms.

$\frac{1}{3}$	$\frac{2}{5}$	$\frac{8}{3}$	$\frac{7}{14}$	$\frac{14}{16}$	$\frac{12}{7}$	$\frac{3}{8}$	$\frac{1}{4}$	$\frac{5}{8}$	$\frac{8}{20}$	$\frac{14}{16}$	$\frac{1}{10}$	$\frac{3}{4}$	$\frac{4}{24}$
$\frac{1}{9}$	$\frac{13}{10}$	$\frac{5}{12}$	$\frac{3}{10}$	$\frac{12}{27}$	$\frac{21}{12}$	$\frac{8}{12}$	$\frac{1}{5}$	$\frac{5}{6}$	$\frac{5}{15}$	$\frac{2}{3}$	$\frac{3}{8}$	$\frac{8}{10}$	$\frac{4}{8}$
$\frac{1}{8}$	$\frac{2}{7}$	$\frac{4}{15}$	$\frac{9}{10}$	$\frac{7}{8}$	$\frac{16}{10}$	$\frac{5}{6}$	$\frac{4}{16}$	$\frac{15}{24}$	$\frac{2}{5}$	$\frac{7}{8}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{4}{6}$

② Write the lowest terms fraction for each given fraction. Join the answers in the order of the problems to make an interesting pattern. Not all the fractions in the square will be joined.

1. $\frac{2}{6} = \dots\dots$
2. $\frac{6}{10} = \dots\dots$
3. $\frac{6}{12} = \dots\dots$
4. $\frac{6}{8} = \dots\dots$
5. $\frac{9}{33} = \dots\dots$
6. $\frac{10}{12} = \dots\dots$
7. $\frac{2}{14} = \dots\dots$
8. $\frac{2}{10} = \dots\dots$
9. $\frac{8}{12} = \dots\dots$
10. $\frac{10}{16} = \dots\dots$
11. $\frac{4}{14} = \dots\dots$
12. $\frac{14}{16} = \dots\dots$
13. $\frac{4}{12} = \dots\dots$
14. $\frac{6}{14} = \dots\dots$
15. $\frac{6}{15} = \dots\dots$
16. $\frac{4}{16} = \dots\dots$
17. $\frac{16}{12} = \dots\dots$
18. $\frac{3}{27} = \dots\dots$
19. $\frac{15}{21} = \dots\dots$
20. $\frac{36}{20} = \dots\dots$
21. $\frac{21}{12} = \dots\dots$
22. $\frac{9}{6} = \dots\dots$
23. $\frac{6}{20} = \dots\dots$
24. $\frac{22}{16} = \dots\dots$
25. $\frac{21}{15} = \dots\dots$
26. $\frac{3}{18} = \dots\dots$
27. $\frac{8}{20} = \dots\dots$
28. $\frac{18}{14} = \dots\dots$
29. $\frac{45}{24} = \dots\dots$
30. $\frac{25}{20} = \dots\dots$
31. $\frac{3}{30} = \dots\dots$
32. $\frac{25}{45} = \dots\dots$
33. $\frac{34}{18} = \dots\dots$
34. $\frac{24}{21} = \dots\dots$
35. $\frac{40}{28} = \dots\dots$
36. $\frac{10}{45} = \dots\dots$

<input type="checkbox"/> $\frac{1}{7}$	<input type="checkbox"/> $\frac{1}{5}$	<input type="checkbox"/> $\frac{2}{3}$	<input type="checkbox"/> $\frac{5}{8}$	<input type="checkbox"/> $\frac{8}{9}$	<input type="checkbox"/> $\frac{7}{12}$	<input type="checkbox"/> $\frac{4}{5}$	<input type="checkbox"/> $\frac{5}{3}$	<input type="checkbox"/> $\frac{7}{6}$
<input type="checkbox"/> $\frac{5}{6}$	<input type="checkbox"/> $\frac{8}{5}$	<input type="checkbox"/> $\frac{11}{7}$	<input type="checkbox"/> $\frac{2}{7}$	<input type="checkbox"/> $\frac{2}{11}$	<input type="checkbox"/> $\frac{9}{10}$	<input type="checkbox"/> $\frac{6}{5}$	<input type="checkbox"/> $\frac{13}{7}$	<input type="checkbox"/> $\frac{4}{7}$
<input type="checkbox"/> $\frac{3}{11}$	<input type="checkbox"/> $\frac{11}{12}$	<input type="checkbox"/> $\frac{7}{10}$	<input type="checkbox"/> $\frac{7}{8}$	<input type="checkbox"/> $\frac{7}{3}$	<input type="checkbox"/> $\frac{1}{6}$	<input type="checkbox"/> $\frac{14}{9}$	<input type="checkbox"/> $\frac{13}{8}$	<input type="checkbox"/> $\frac{9}{8}$
<input type="checkbox"/> $\frac{3}{4}$	<input type="checkbox"/> $\frac{1}{2}$	<input type="checkbox"/> $\frac{3}{5}$	<input type="checkbox"/> $\frac{1}{3}$	<input type="checkbox"/> $\frac{3}{8}$	<input type="checkbox"/> $\frac{5}{12}$	<input type="checkbox"/> $\frac{4}{7}$	<input type="checkbox"/> $\frac{11}{10}$	<input type="checkbox"/> $\frac{4}{9}$
<input type="checkbox"/> $\frac{19}{12}$	<input type="checkbox"/> $\frac{1}{11}$	<input type="checkbox"/> $\frac{13}{10}$	<input type="checkbox"/> $\frac{3}{7}$	<input type="checkbox"/> $\frac{6}{7}$	<input type="checkbox"/> $\frac{12}{7}$	<input type="checkbox"/> $\frac{10}{9}$	<input type="checkbox"/> $\frac{19}{12}$	<input type="checkbox"/> $\frac{8}{3}$
<input type="checkbox"/> $\frac{11}{8}$	<input type="checkbox"/> $\frac{7}{5}$	<input type="checkbox"/> $\frac{1}{6}$	<input type="checkbox"/> $\frac{2}{5}$	<input type="checkbox"/> $\frac{9}{7}$	<input type="checkbox"/> $\frac{15}{8}$	<input type="checkbox"/> $\frac{5}{4}$	<input type="checkbox"/> $\frac{1}{10}$	<input type="checkbox"/> $\frac{5}{9}$
<input type="checkbox"/> $\frac{3}{10}$	<input type="checkbox"/> $\frac{11}{9}$	<input type="checkbox"/> $\frac{9}{4}$	<input type="checkbox"/> $\frac{1}{4}$	<input type="checkbox"/> $\frac{5}{2}$	<input type="checkbox"/> $\frac{11}{6}$	<input type="checkbox"/> $\frac{11}{4}$	<input type="checkbox"/> $\frac{13}{12}$	<input type="checkbox"/> $\frac{17}{9}$
<input type="checkbox"/> $\frac{3}{2}$	<input type="checkbox"/> $\frac{17}{12}$	<input type="checkbox"/> $\frac{13}{10}$	<input type="checkbox"/> $\frac{4}{3}$	<input type="checkbox"/> $\frac{10}{3}$	<input type="checkbox"/> $\frac{1}{12}$	<input type="checkbox"/> $\frac{7}{9}$	<input type="checkbox"/> $\frac{17}{10}$	<input type="checkbox"/> $\frac{8}{7}$
<input type="checkbox"/> $\frac{7}{4}$	<input type="checkbox"/> $\frac{9}{5}$	<input type="checkbox"/> $\frac{5}{7}$	<input type="checkbox"/> $\frac{1}{9}$	<input type="checkbox"/> $\frac{13}{9}$	<input type="checkbox"/> $\frac{11}{6}$	<input type="checkbox"/> $\frac{1}{8}$	<input type="checkbox"/> $\frac{2}{9}$	<input type="checkbox"/> $\frac{10}{7}$

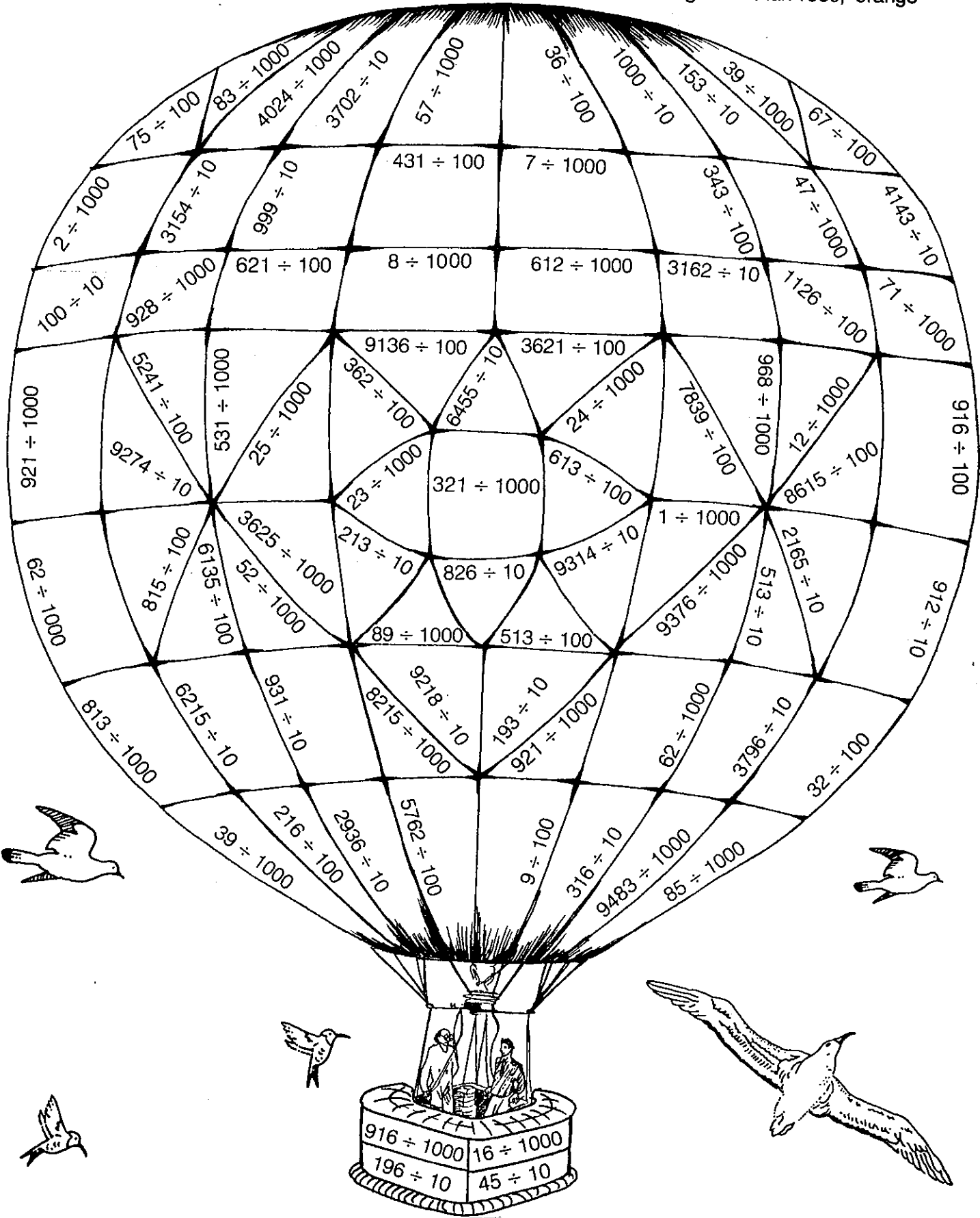


37. $\frac{4}{32} = \dots\dots$
38. $\frac{22}{12} = \dots\dots$
39. $\frac{3}{36} = \dots\dots$
40. $\frac{33}{18} = \dots\dots$
41. $\frac{30}{16} = \dots\dots$
42. $\frac{36}{21} = \dots\dots$
43. $\frac{30}{72} = \dots\dots$
44. $\frac{4}{24} = \dots\dots$
45. $\frac{27}{30} = \dots\dots$
46. $\frac{35}{60} = \dots\dots$
47. $\frac{20}{25} = \dots\dots$
48. $\frac{15}{9} = \dots\dots$
49. $\frac{21}{18} = \dots\dots$
50. $\frac{12}{21} = \dots\dots$
51. $\frac{18}{16} = \dots\dots$
52. $\frac{20}{45} = \dots\dots$
53. $\frac{33}{30} = \dots\dots$
54. $\frac{16}{28} = \dots\dots$
55. $\frac{25}{60} = \dots\dots$
56. $\frac{12}{32} = \dots\dots$
57. $\frac{6}{18} = \dots\dots$
58. $\frac{18}{21} = \dots\dots$
59. $\frac{60}{32} = \dots\dots$
60. $\frac{36}{28} = \dots\dots$
61. $\frac{20}{50} = \dots\dots$
62. $\frac{60}{70} = \dots\dots$
63. $\frac{40}{96} = \dots\dots$

Dividing by 10, 100, 1000

① What is: $5 \div 10 =$ $5 \div 100 =$ $5 \div 1000 =$
 $3000 \div 10 =$ $3000 \div 100 =$ $3000 \div 1000 =$

② Work the divisions. Colour sections according to the following pattern:
 answers less than 0.099, red
 0.1 to 0.999, blue
 1 to 9.999, green
 10 to 99.999, yellow
 100 to 999.999, purple
 greater than 1000, orange



Write each number in expanded notation, in words and as a numeral.

HTh	TTh	Th	H	T	U

.....

.....

.....

HTh	TTh	Th	H	T	U

.....

.....

.....

HTh	TTh	Th	H	T	U

.....

.....

.....

HTh	TTh	Th	H	T	U

.....

.....

.....

Who am I?

- Ring the correct numbers.
- I do not have 7 in my units place.
- I do not have 1 in my hundreds place.
- I do not have 9 in my ten thousands place.
- I have an even number in my thousands place.
- I have 9 as one of my digits.
- The sum of my first three digits is the same as that of my last 3 digits.

562 178	586 213
593 216	538 619
532 168	563 872
519 327	521 936

987 654	843 629
832 186	613 692
621 826	619 269
329 692	562 992

- I have an even number in my hundred thousands place.
- I do not have a 9 in my thousands place.
- I have an odd number in my tens place.
- I do not have a 6 in my ten thousands.
- The sum of my hundred thousands digit and my thousands digit is equal to my tens digit.

- I do not have a 9 in my thousands place.
- My hundred thousands digit is greater than my units digit.
- I do not have 5 in my hundreds place.
- My ten thousands digit is less than my tens digit.
- I do not have 1 in my ten thousands place.

716 530	713 264
596 187	316 339
326 915	562 693
519 368	512 659

Use the number on the telephone to write the given numbers.

one more

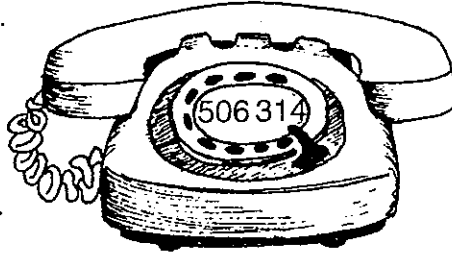
one thousand more

one ten less

one ten thousand less

one hundred more

one hundred thousand more



Order the numbers from smallest to greatest.

.....
.....
.....

STAGES FOR DIVISION BY MULTIPLES OF TEN

Stage 1

Two digits with and without remainders

$$80 \div 20, 79 \div 30$$

Stage 6

Four digits, zero in quotient and/or dividend

$$7059 \div 70, 6000 \div 40, 6186 \div 30$$

Stage 2

Three digits, tens digit in quotient

$$849 \div 40$$

Stage 7

Five digits, thousands digit in quotient

$$76\,589 \div 40$$

Stage 3

Three digits, no tens digit in quotient

$$387 \div 60$$

Stage 8

Five digits, no thousands digit in quotient

$$24\,569 \div 80$$

Stage 4

Four digits, hundreds digit in quotient

$$8576 \div 50$$

Stage 9

Five digits, zero in quotient and/or dividend

$$21\,000 \div 70, 60\,240 \div 60, 86\,925 \div 80,$$

Stage 5

Four digits, no hundreds digit in quotient

$$4856 \div 50$$

Solve the problems.

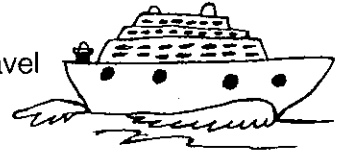
Write the answers in order beginning with the largest.

Write the matching letters to give the answer

Show the working out above, in the space.

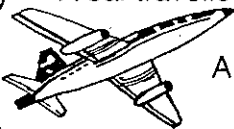
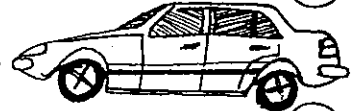
How many minutes in 39 240 seconds? (E)

(T) A large ocean liner travels at 50 km/h. How long would it take to travel 5950 km?



A train travels at 90 km/h. How long would it take to travel 5040 km? (S)

(O) A car travelled 3120 km in 40 hours. What was its average speed?



A jet travelled 11 920 km in 20 hours of flying. What was its average speed? (S)

(T) A ship travelled 2220 km at a speed of 60 km/h. How long did it take?



(T) A car was driven 3150 km in 30 hours. At what speed was the car travelling? (T)



(K) A train averages 50 km/h. How long does it take to travel 3450 km?



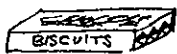
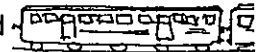
Chocolates are packed in boxes of 30. How many boxes can be packed from 16 920 chocolates? (I)

(I) A box containing 1980 stamps was shared among 60 children. How many stamps did they each receive?



There are 30 children in the class. The sum of their mental scores out of 100 is 2640. What is the average mental score? (O)

(L) A carriage on a train holds 70 people. How many carriages would be needed to hold 4760 people?



Biscuits are packed into packets containing 40 biscuits. How many packets can be filled from 2600 biscuits? (E)

(Y) How many hours in 59 220 minutes?



A car used 30 litres of petrol while travelling 420 km. What was the petrol consumption of the car? (E)

(M) Classes each containing 30 children were made from 840 children. How many classes were made?



A page in a stamp album holds 50 stamps. How many pages can be filled from 3200 stamps? (S)

Challenge Question: A car travelled for 11 hours 30 minutes. 420 km was travelled in a 60 km/h speed zone and then 400 km was travelled in an 80 km/h speed zone. Did the car travel above the speed limit?

.....

Fractions to Decimals and Decimals to Fractions!

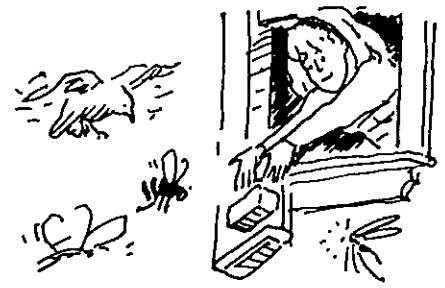
- ① When changing Fractions to decimals, try and get 10, 100, or 1000 on the bottom (denominator).
 eg. $1\frac{1}{2} \times \frac{5}{5} = 1\frac{5}{10} = 1.5$ Try these: $2\frac{1}{2} =$ $5\frac{3}{4} =$
- ② When converting a decimal to a fraction: EASY! $3.14 = 3\frac{14}{100} = 3\frac{7}{50}$

③ Express the decimals as fractions or mixed numbers in lowest terms. Use the matching letters to answer the riddles.

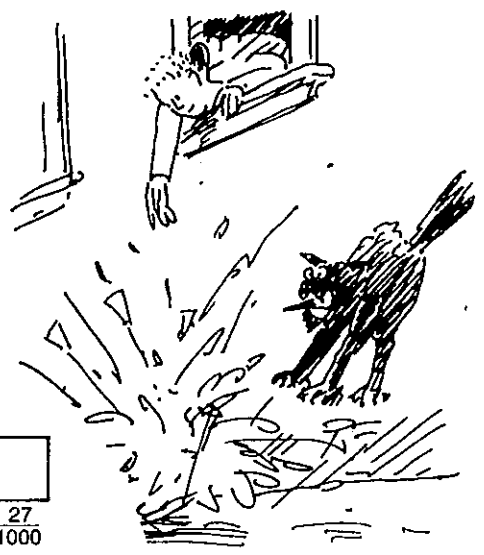
Why did the girl throw the butter out of the window?

$3\frac{7}{8}$	$3\frac{7}{1000}$	$3\frac{107}{1000}$	$3\frac{1}{2}$	$3\frac{41}{125}$	$3\frac{3}{8}$	$3\frac{29}{40}$	$3\frac{27}{40}$	$3\frac{3}{4}$	$3\frac{13}{40}$	$3\frac{14}{25}$	$3\frac{7}{250}$	$3\frac{12}{125}$	$3\frac{39}{250}$

$3\frac{41}{250}$	$3\frac{9}{125}$	$3\frac{79}{500}$	$3\frac{659}{1000}$	$3\frac{5}{8}$	$3\frac{1}{4}$	$3\frac{1}{8}$	$3\frac{43}{200}$	$3\frac{93}{200}$



- | | | | |
|---|--|---|-------------------------|
| S | $3.875 = 3\frac{875}{1000} = 3\frac{7}{8}$ | F | $3.125 = \dots = \dots$ |
| W | $3.5 = \dots = \dots$ | E | $3.107 = \dots = \dots$ |
| E | $3.625 = \dots = \dots$ | T | $3.325 = \dots = \dots$ |
| N | $3.375 = \dots = \dots$ | E | $3.096 = \dots = \dots$ |
| O | $3.560 = \dots = \dots$ | L | $3.215 = \dots = \dots$ |
| U | $3.072 = \dots = \dots$ | Y | $3.465 = \dots = \dots$ |
| T | $3.659 = \dots = \dots$ | B | $3.164 = \dots = \dots$ |
| S | $3.028 = \dots = \dots$ | R | $3.25 = \dots = \dots$ |
| H | $3.007 = \dots = \dots$ | E | $3.156 = \dots = \dots$ |
| A | $3.328 = \dots = \dots$ | T | $3.725 = \dots = \dots$ |
| D | $3.75 = \dots = \dots$ | E | $3.675 = \dots = \dots$ |
| T | $3.158 = \dots = \dots$ | | |



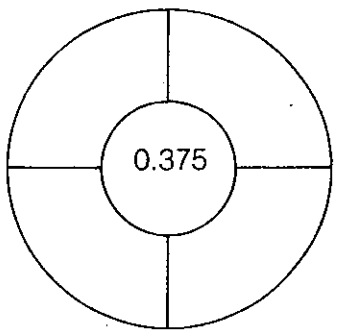
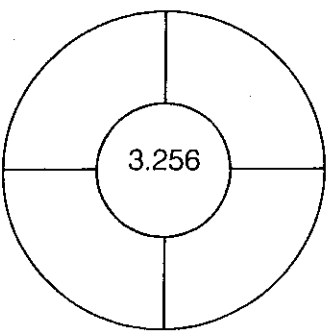
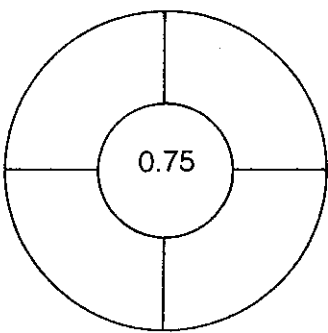
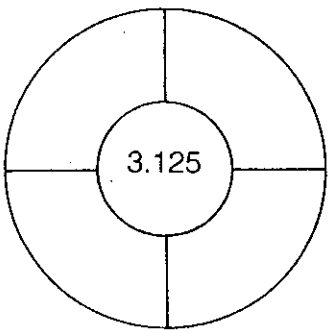
④ Why did the boy throw a glass of water out of the window?

$4\frac{597}{1000}$	$4\frac{729}{1000}$	$4\frac{529}{1000}$	$4\frac{357}{1000}$	$4\frac{213}{250}$	$4\frac{47}{200}$	$4\frac{1}{4}$	$4\frac{37}{40}$	$4\frac{167}{200}$	$4\frac{27}{1000}$

$4\frac{239}{250}$	$4\frac{99}{100}$	$4\frac{9}{500}$	$4\frac{1}{1000}$	$4\frac{21}{40}$	$4\frac{201}{1000}$	$4\frac{333}{1000}$	$4\frac{3}{40}$	$4\frac{341}{500}$	$4\frac{1}{8}$	$4\frac{2}{5}$	$4\frac{7}{8}$	$4\frac{401}{500}$	$4\frac{3}{20}$

- | | | | | | |
|---|-------------------------------------|---|-------------------------|---|-------------------------|
| E | $4.729 = 4\frac{729}{1000} = \dots$ | H | $4.15 = \dots = \dots$ | M | $4.956 = \dots = \dots$ |
| W | $4.529 = \dots = \dots$ | N | $4.852 = \dots = \dots$ | K | $4.018 = \dots = \dots$ |
| T | $4.835 = \dots = \dots$ | E | $4.25 = \dots = \dots$ | S | $4.682 = \dots = \dots$ |
| H | $4.597 = \dots = \dots$ | T | $4.235 = \dots = \dots$ | E | $4.001 = \dots = \dots$ |
| A | $4.357 = \dots = \dots$ | A | $4.99 = \dots = \dots$ | P | $4.125 = \dots = \dots$ |
| B | $4.201 = \dots = \dots$ | D | $4.925 = \dots = \dots$ | G | $4.075 = \dots = \dots$ |
| A | $4.525 = \dots = \dots$ | I | $4.333 = \dots = \dots$ | L | $4.4 = \dots = \dots$ |
| O | $4.027 = \dots = \dots$ | S | $4.802 = \dots = \dots$ | A | $4.875 = \dots = \dots$ |

1 Write 4 different fractions which have the same value as each decimal.

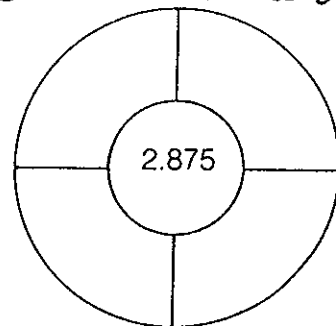
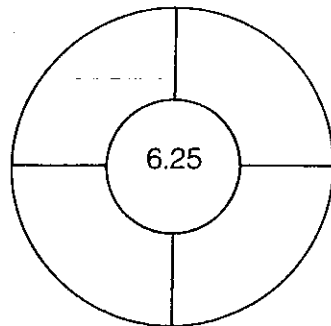
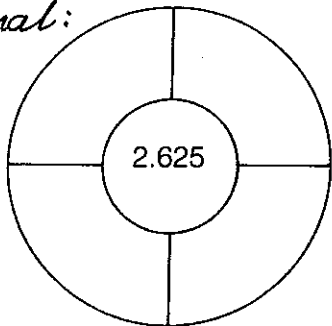
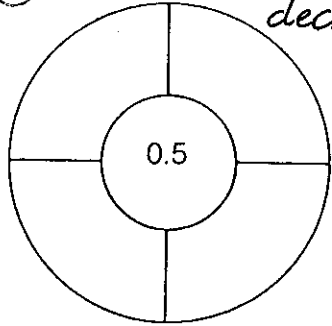


2

Fraction	Equivalent Fraction	Decimal	Fraction	Equivalent Fraction	Decimal
$\frac{1}{2}$	$\frac{1}{2} = \frac{5}{10}$	0.5	$1\frac{7}{8}$		
$\frac{3}{50}$			$4\frac{3}{10}$		
$2\frac{1}{4}$			$2\frac{7}{20}$		
$4\frac{3}{4}$			$3\frac{1}{8}$		
$2\frac{3}{5}$			$4\frac{17}{40}$		
$2\frac{7}{40}$			$4\frac{3}{125}$		
$2\frac{1}{125}$			$4\frac{3}{200}$		
$2\frac{18}{25}$			$4\frac{19}{1000}$		
$3\frac{1}{25}$			$2\frac{5}{8}$		
$\frac{17}{1000}$			$2\frac{17}{20}$		
$2\frac{17}{100}$			$3\frac{971}{1000}$		
$2\frac{9}{50}$			$2\frac{3}{10}$		
$4\frac{7}{25}$			$3\frac{3}{1000}$		
$3\frac{72}{125}$			$3\frac{9}{20}$		
$4\frac{17}{50}$			$2\frac{16}{125}$		
$2\frac{13}{40}$			$4\frac{19}{50}$		
$4\frac{551}{1000}$			$3\frac{127}{250}$		
$3\frac{49}{50}$			$2\frac{32}{125}$		
$2\frac{3}{8}$			$2\frac{653}{1000}$		
$3\frac{33}{125}$			$3\frac{7}{500}$		

Colour green the sections containing those decimals. Colour the remaining sections yellow.

① Write 4 different fractions which have the same value as each decimal:

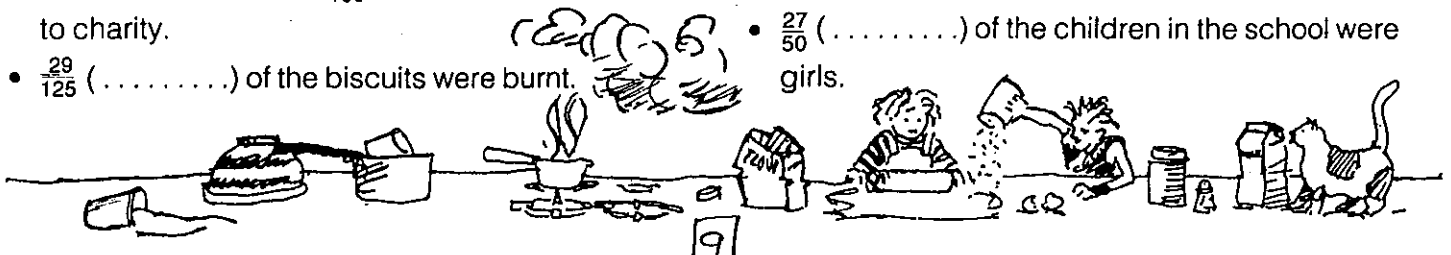


Trace a path through the maze by moving through the squares which contain correct statements.

START ▼					
$\frac{1}{8} = 0.125$	$2\frac{1}{4} = 2.025$	$2\frac{1}{2} = 2.5$	$4\frac{3}{4} = 4.75$	$\frac{7}{20} = 0.35$	$3\frac{4}{8} = 3.425$
$\frac{4}{5} = 0.8$	$2\frac{3}{10} = 2.3$	$3\frac{4}{25} = 3.16$	$9\frac{7}{10} = 9.07$	$3\frac{1}{40} = 3.025$	$6\frac{1}{4} = 6.75$
$2\frac{5}{8} = 2.725$	$2\frac{10}{100} = 2.15$	$3\frac{7}{25} = 3.7$	$4\frac{3}{8} = 4.378$	$4\frac{7}{50} = 4.14$	$2\frac{57}{100} = 2.57$
$3\frac{7}{100} = 3.7$	$1\frac{72}{1000} = 1.072$	$3\frac{5}{8} = 3.625$	$2\frac{27}{100} = 2.27$	$3\frac{7}{8} = 3.7$	$\frac{9}{1000} = 0.009$
$3\frac{72}{500} = 3.144$	$2\frac{9}{20} = 2.45$	$9\frac{2}{10} = 9.25$	$3\frac{1}{4} = 3.25$	$\frac{1}{2} = 0.5$	$2\frac{728}{1000} = 2.728$
FINISH ↓					

Complete the sentences, expressing each fraction as a decimal and each decimal as a fraction in lowest terms.

- Each bottle contains 0.3 L (..... L) of oil.
- A piece of paper is 4.28 m (..... m) long.
- A human hair is 0.005 cm (..... cm) in width.
- A room is 3.78 m (..... m) long.
- Sally swam $\frac{3}{8}$ km (..... km).
- Sam bought $\frac{27}{40}$ kg (..... kg) of cheese.
- $\frac{7}{50}$ (.....) of the jelly beans were black.
- I bought $\frac{3}{4}$ t (..... t) gravel.
- The dressmaker bought 3.15 m (..... m) of material.
- The capacity of the bottle is $2\frac{3}{5}$ L (..... L).
- A book is $3\frac{7}{20}$ cm (..... cm) thick.
- The race was run over 3.725 km (..... km).
- The cake was cooked in 1.5 h (..... h).
- A farmer planted 0.375 (.....) of his land with wheat.
- A wealthy man gave $\frac{49}{100}$ (.....) of his money to charity.
- $\frac{29}{125}$ (.....) of the biscuits were burnt.
- The bag has a mass of 3.275 kg (..... kg).
- The perimeter of a triangle is 3.975 m (..... m).
- A litre of liquid has a mass of $1\frac{7}{25}$ kg (..... kg).
- A feeler guage is 0.014 cm (..... cm) thick.
- A boy spends $\frac{1}{5}$ (.....) of his day playing football.
- $\frac{7}{25}$ (.....) of the class is 11 years old.
- A farmer has a paddock with an area of 16.37 km² (..... km²).
- I bought $\frac{13}{20}$ kg (..... kg) sausages.
- I saved 0.95 (.....) of a dollar.
- Sue swam for $3\frac{17}{20}$ hours (..... hours).
- Sean walked 2.19 km (..... km) to school.
- The pool is $3\frac{2}{5}$ m (..... m) deep.
- I have read 0.125 (.....) of the pages.
- $\frac{17}{25}$ (.....) of the trees in an orchard were pear trees.
- $\frac{27}{50}$ (.....) of the children in the school were girls.



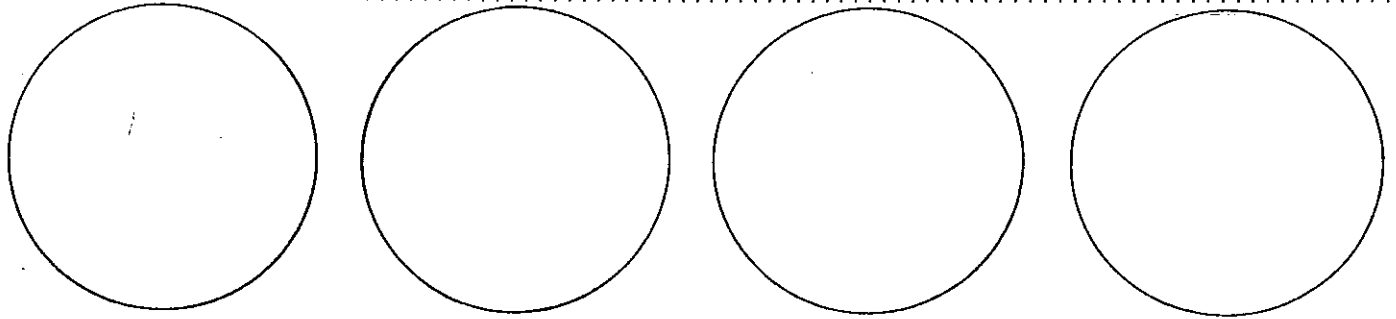
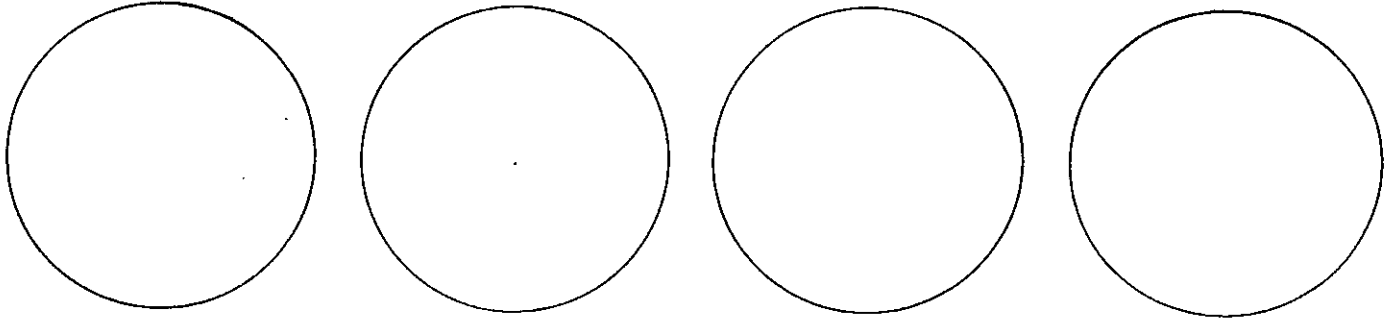
Constructing POLYGONS (straight sided shapes) in circles.

① Mark 3 points on the circumference of the first circle.

Rule lines to join the points.

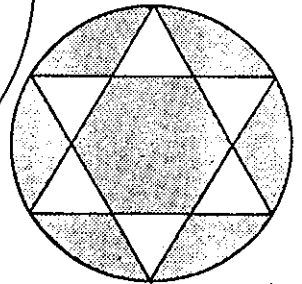
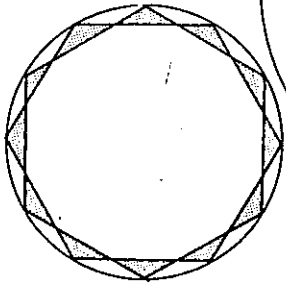
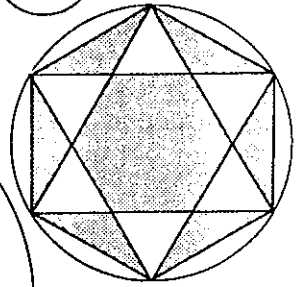
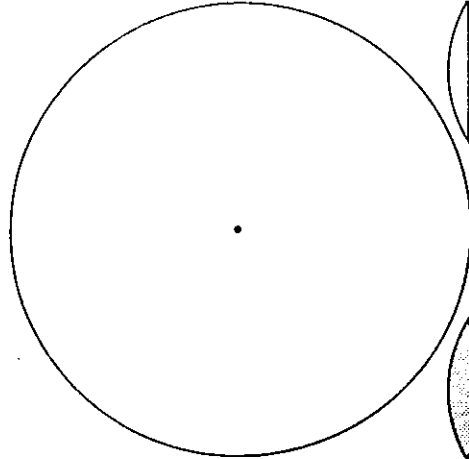
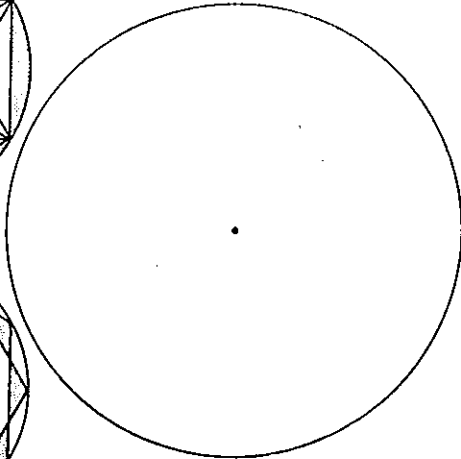
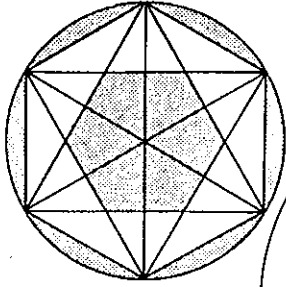
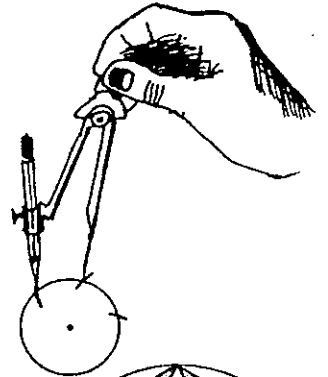
Name the shape. Is it regular or irregular?

Repeat, marking 4, 5, 6, 7, 8, 9 and 10 points on the circumferences of the other circles to draw shapes with 4, 5, 6, 7, 8, 9 and 10 sides. Name each shape.



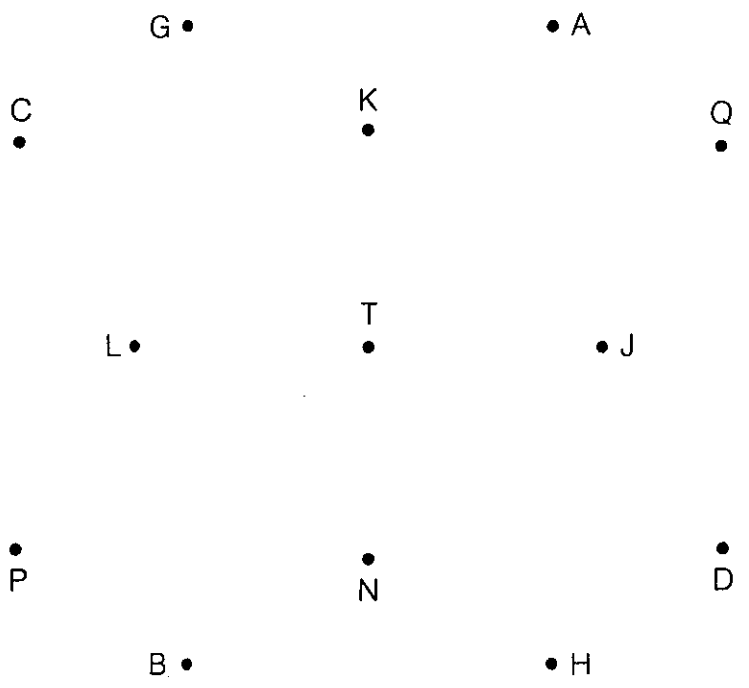
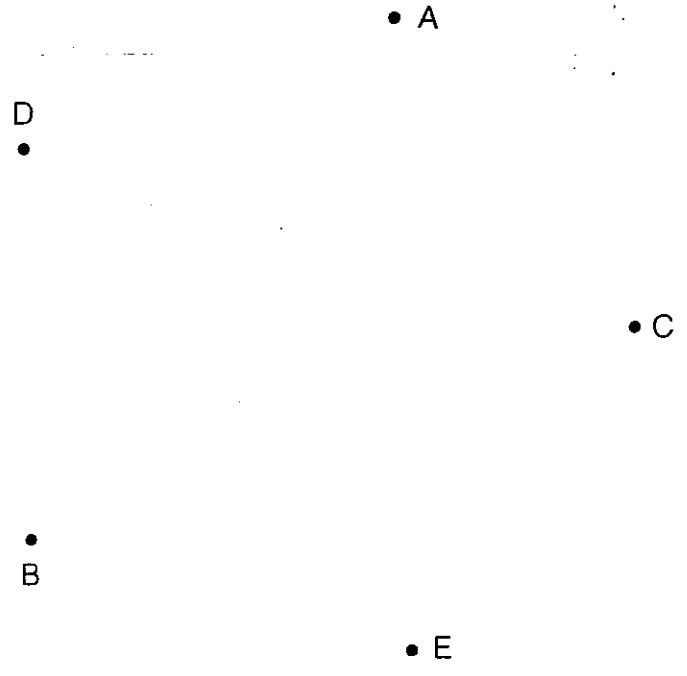
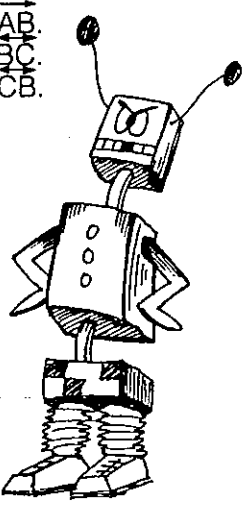
② Using a compass, draw a circle with a 12cm diameter.
 Using a ruler and the compass, construct a regular polygon (eg. an equilateral Δ , square.....)

Open your compass to match the radius of the large circles below.
 Be sure to keep this compass opening for the whole activity.
 Place your compass point on the circumference of the circle.
 Draw a small arc to cut the circle.
 Now place the compass point at the intersection of the circumference and the arc.
 Draw another small arc.
 Continue until six arcs have been drawn.
 Join the points of intersection with ruled lines to form a regular hexagon.
 Repeat the activity and join alternate points to draw a regular triangle.
 Label each polygon.
 On blank paper, using the same procedure, try to construct the patterns shown below.
(at the bottom).



Lines!

- Rule the line segment CD in red.
- Rule the line DE in yellow.
- Rule the ray AE in green.
- Rule \overline{BC} in yellow.
- Rule \overline{AB} in green.
- Label the point X where \overline{DE} intersects \overline{AB} .
- Label the point Y where \overline{AE} intersects \overline{BC} .
- Label the point Z where \overline{DE} intersects \overline{CB} .
- Rule \overline{AZ} in blue.
- Rule \overline{CX} in red.
- Rule \overline{DY} in red.



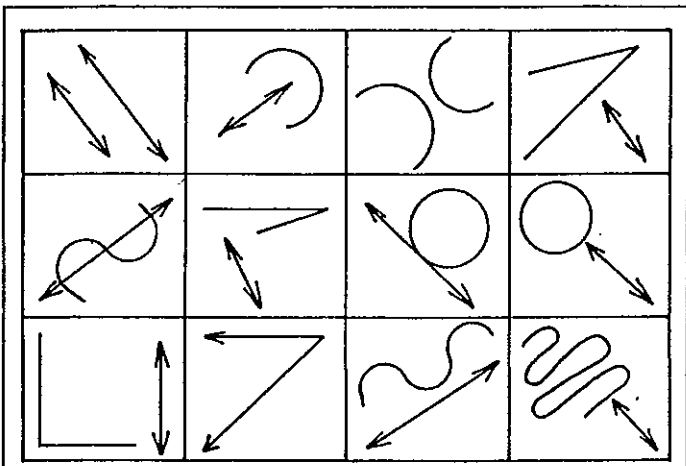
- Rule the lines AB and HG in red.
- Rule the rays TC and TD in blue.
- Rule \overline{NB} and \overline{AK} in green.
- Rule \overline{QJ} and \overline{CL} in yellow.
- Rule \overline{PQ} in blue.
- Rule \overline{KG} and \overline{HN} in green.
- Rule \overline{DJ} and \overline{LP} in yellow.

The perpendicular bisector of \overline{AG} passes through and

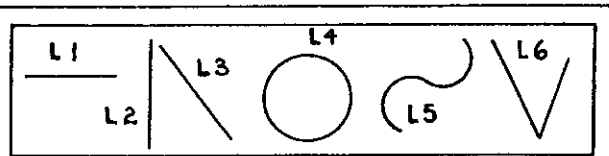
\overline{PB} is the same length as, and

Using the points given, rule 3 different squares with vertices at the points.

Name the squares



Label each pair of lines as intersecting (I) or non-intersecting (N.I.) Mark each point of intersection in red.

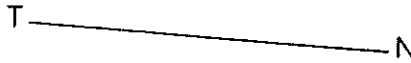


- Draw:
- a straight line that intersects L1
 - a curved line that intersects L2 twice
 - a curved line that intersects L3 four times
 - a straight line that intersects L4 once
 - a curved line that intersects L5 once
 - a straight line that does not intersect L6

Use a set square and a ruler to draw:
3 parallel oblique rays

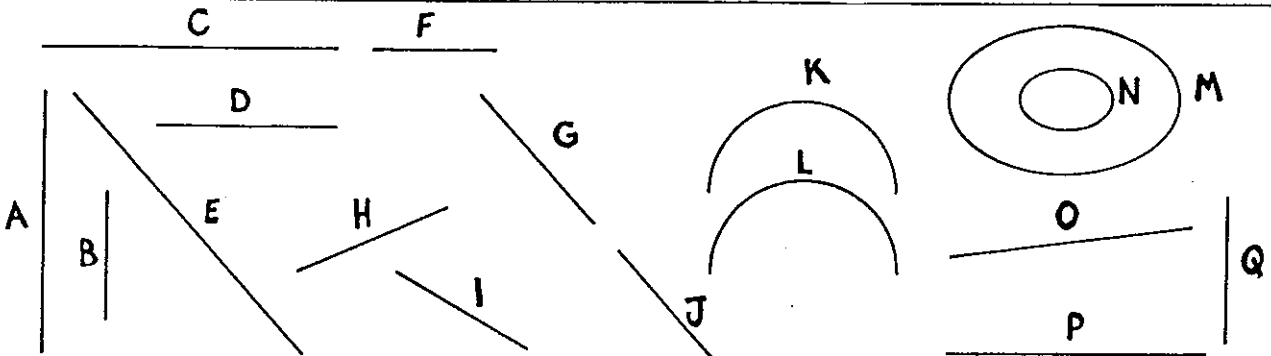
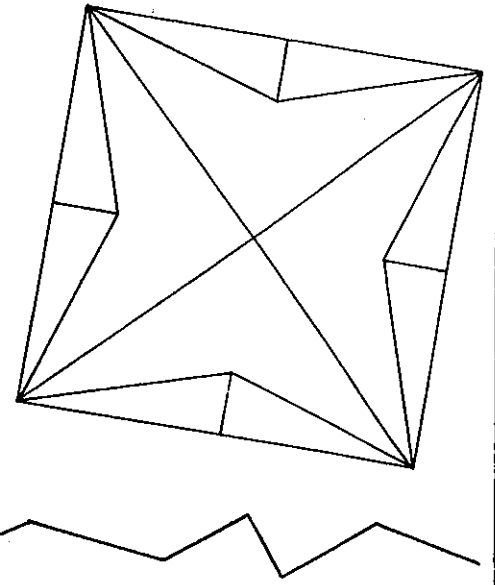
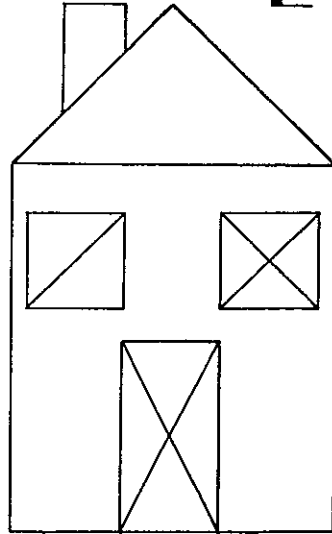
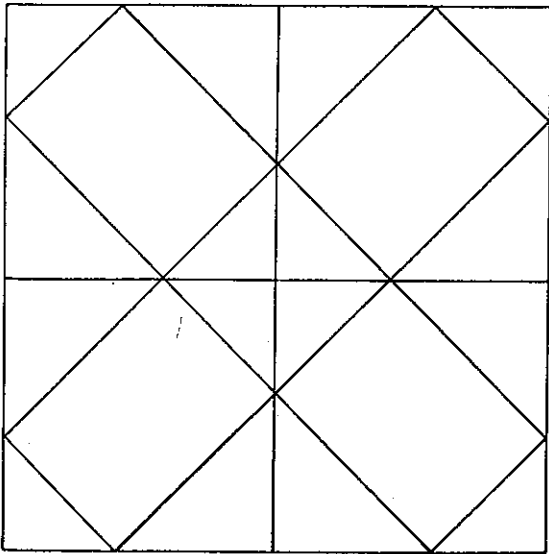
A line perpendicular to \overline{TN}

Perpendicular lines intersecting at A



• A

Use a set square to find sets of perpendicular lines. Mark them with \perp



1. C is parallel to, ... and ...
2. B is parallel to ...
3. Is H parallel to I?
4. Is Q parallel to P?
5. K is/is not parallel to L?
6. Q is parallel to ... and ...
7. G is/is not parallel to J?
8. Rule a red line parallel to H
9. Rule a green line parallel to I
10. Rule a blue line which is not parallel to O
11. Is M parallel to N? Why?

A E H I K F T V X Z L Y

Name the letter(s) made from:

- one pair of vertical, parallel line segments and one horizontal line segment
- one vertical and one horizontal line segment
- two oblique line segments
- one pair of horizontal, parallel line segments and one oblique line segment
- one vertical and two oblique line segments
- one horizontal and two oblique line segments
- a pair of horizontal, parallel line segments and one vertical line segment
- four oblique line segments

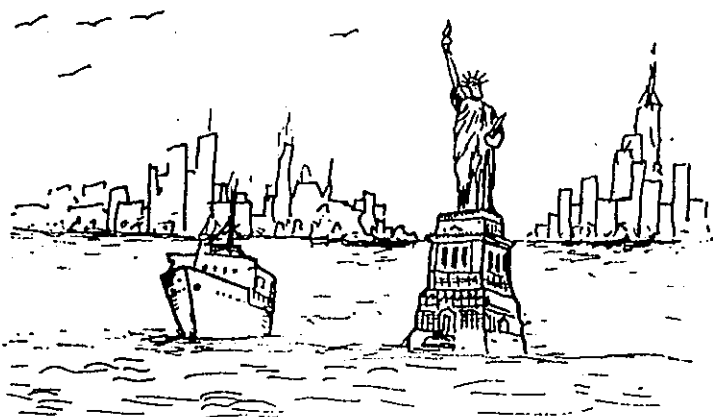
N W

Profit & Loss

- ① Lee bought a bag of marbles for 85c and then he sold them to Kym for \$1.00
 What is the cost price (C.P.)?
 What is the selling price (S.P.)?
 What was the profit Lee made?

② Find the profit or loss in each situation.
 Write your answer using the word profit or loss.
 Match your answers to the boxes below and write the problem letter to solve the riddle.

- | | | |
|--|---|----------|
| E A gate is manufactured for \$209 and sold for \$300. | A car was sold by a wholesaler for \$7753.41 and resold at a car dealer's for \$15 668.79. | H |
| I A 1935 motorcycle sold recently for \$6000. Its purchase price was \$68.85 back in 1935. | Land bought 3 years ago for \$25 600 sold today for \$40 250. | U |
| B A library book sale fetched \$1084.62 for books which had cost \$9000. | Farmer Melrose paid \$15 each for ten sheep. Four only survived. | O |
| T A wholesaler's price for a football is \$10.86. A store sells the football for \$19.09. | A sandwich is priced at \$1.05 and costs 49c for the ingredients. | S |
| W Rose paid \$640 for her horse and sold him 5 years later for \$560. | A storekeeper bought a T.V. from a wholesaler for \$565. He sold it for \$729. | D |
| C A bicycle costs a store-owner \$88.95. She sells it for \$104.00. | | |
| A A damaged wheelbarrow was sold for \$53.25. The cost from the wholesaler was \$61.48. | | |
| N Bill paid \$98.50 for apples which he sold for \$79.10. | | |



Why does the Statue of Liberty stand in New York harbour?

\$7915.38	\$91	\$15.05	\$8.23	\$14 650	56c	\$91
loss	profit	profit	loss	profit	profit	profit

56c	\$7915.38	\$91
profit	profit	profit

\$15.05	\$8.23	\$19.40	\$8.23
profit	loss	loss	profit

56c	\$5931.15	\$8.23
profit	profit	profit

\$164	\$90	\$80	\$19.40
profit	loss	loss	loss

Profit & Loss

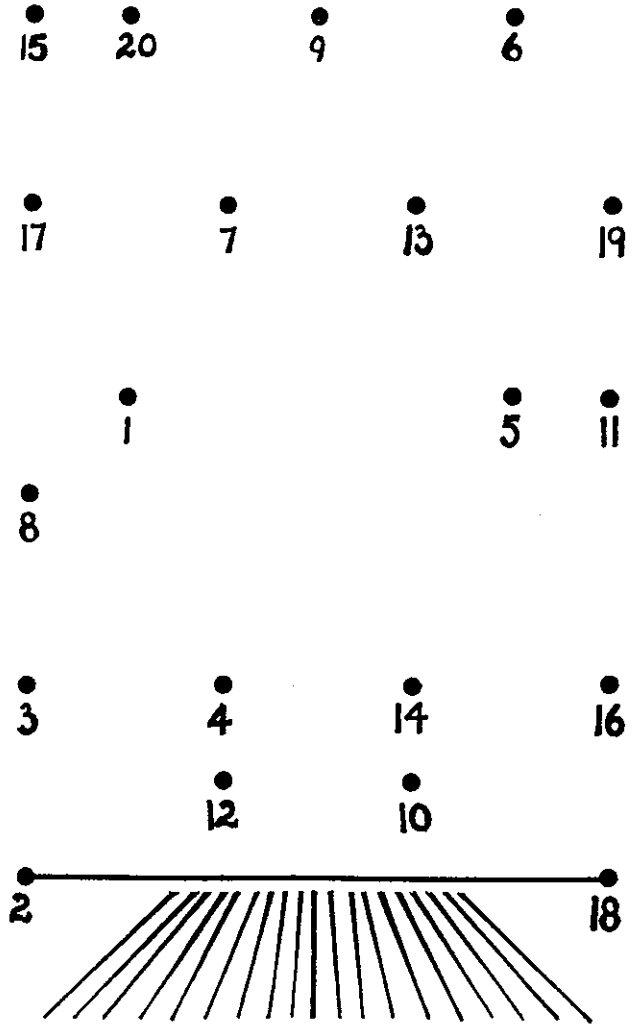
①

JOIN THE DOTS

Work the problems and then join, in order, the numbers of the problems which have a profit of \$12.

Find the profit or loss:

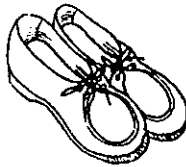
1. C.P. = \$52 S.P. = \$62
2. C.P. = \$32.50 S.P. = \$44.50
3. S.P. = \$12.35 C.P. = 35c
4. C.P. = \$11.20 S.P. = \$23.20
5. C.P. = \$459 S.P. = \$447
6. C.P. = \$112.50 S.P. = \$102.50
7. S.P. = \$1072 C.P. = \$1060
8. C.P. = \$331 S.P. = \$309
9. S.P. = \$19.75 C.P. = \$7.75
10. S.P. = \$106 C.P. = \$118
11. Flowers are sold for \$17.50, C.P. = \$5
12. 5 book were sold for a profit of \$2.50 each
13. Two bike tyres cost \$83 and are sold for \$95
14. A game was bought for \$6 and sold for three times the C.P.
15. 10 pens each were sold at a profit of \$1.30
16. Cost price of a dress is \$33, selling price is \$45
17. 9 doll's dresses each sold at a loss of \$1.50
18. 24 dozen eggs sold for a profit of 50c per dozen.
19. Selling price \$108.90, cost price \$120.90
20. Sold three bike helmets for a profit of \$3.50 each



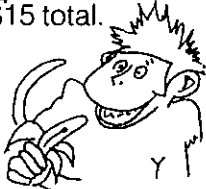
② Jean and Norm both run their own businesses buying and selling goods. Work out their profit or loss on each deal. Use your calculations to work out who is the better business dealer.

Who's Better?

Jean bought two hundred pairs of shoes at \$15 a pair and sold them for \$25 a pair.



Jean purchased entire stock of one grower's bananas: 100 kg at 50c per kg. She sold $\frac{3}{4}$ of the bananas at \$1 per kg and the rest to the zoo for \$15 total.



An umbrella shipment cost Jean \$900. 50 were sold for \$12.99 each but the remaining 50 had to be discarded when moths attacked the fabric in them.



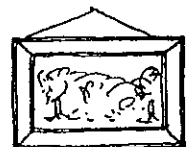
During the drought, farmers had no feed for their cows. Norm bought a herd for \$12 000 but the drought continued and Norm eventually sold them for \$8630.



Norm loves horses. He bought a racehorse for \$2500 and after 3 wins it was sold for \$18 500.




A painting sold at auction for \$9065 after Norm had purchased it 5 years earlier for \$2000.

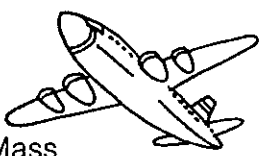


metrics

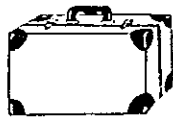
① Complete the metric data sheet for each object.




Capacity
900 mL = L
Length
200 mm = cm
Depth
3 cm = m




Mass
351 540 kg = t
Length
70.5 m = km
Wing span
59.63 m = km




Length
80 cm = m
Width
500 mm = cm
Capacity
100 000 mL = L



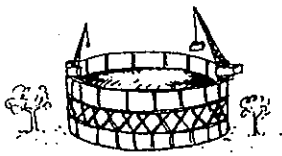
Mass
3600 g = kg
Height at shoulder
203 mm = cm




Height
580 cm
= m
Mass
3400 kg
= t




Mass
153 000 kg = t
Length
3353 cm = m



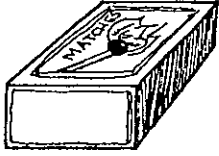
Largest oil tank
Capacity
160 000 000 L
= kL




Height
557.2 cm
= m
Length
14.22 m
= km




Mass
6500 g = kg
Height at shoulder
228.6 mm = cm




Capacity
29.75 mL = L
Length
50 mm = m




Mass
980 kg = t
Length
406.3 cm = m




Mass
65 800 g = kg
Length
304.8 cm = m



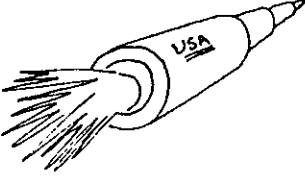
Mass
800 g
= kg
Height
140 mm
= cm
Capacity
352 mL = L




Mass
7000 kg = t
Height at shoulder
354.8 cm = m




Capacity
600 mL
= L
Mass
805 g
= kg
Height
25 cm
= m



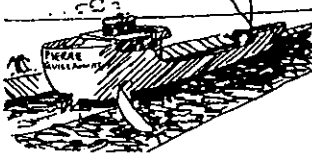
Mass 2 960 194 kg
= t
Length
110 m = km




Mass
430 kg = t
Height at shoulder
182 cm = m



Capacity
20 mL = L
Height
6 cm = m
Mass
65 g = kg



Length
414.2 m = km
Oil capacity
678 000 000 L
= kL



Mass
30 g = kg
Height at shoulder
6.5 cm = m

② Metric Sale of the Century!

- Make up about 12 cards 10 x 6 cm.
- Write a metric question on each card.
- Join your cards with 3 or 4 other people's and play the Sale of the Century game with them.

METRIC MADNESS

①

Shirley and Michael are building a new room and verandah onto their home. The types of materials needed are illustrated but the measurements are in units which are too small. Write each measurement using a larger metric unit.

② Write each of the given measurements as metres. Connect the dots in order of given length.

- | | |
|--------|----------|
| 280 mm | 4 cm |
| ... m | ... m |
| • | • |
| 102 cm | • |
| ... m | 1100 mm |
| • | • 200 cm |
| 30 cm | ... m |
| • | • |
| 490 mm | 133 cm |
| ... m | ... m |

- Join 0.28 m to 1.02 m
 0.49 m to 1.33 m
 1.10 m to 0.04 m
 0.04 m to 2.00 m
 0.30 m to 2.00 m
- Name the shape drawn. _____

① Write 8 metric facts

1 _____
 2 _____
 3 _____
 4 _____

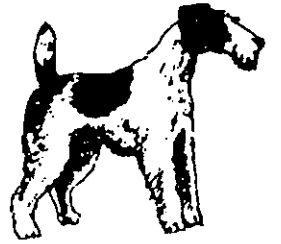
5 _____
 6 _____
 7 _____
 8 _____

② Complete each relationship.
 Rule lines to join the answers in the order of the questions.
 Is the resulting pattern symmetrical?

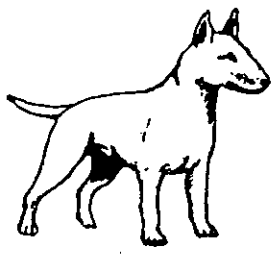
1. 14 900 kg = t
2. 156 492 m = km
3. 8 kg = t
4. 180 cm = m
5. 1 mL = L
6. 8 mm = cm
7. 2689 g = kg
8. 10 m = km
9. 500 mL = L
10. 98 g = kg
11. 49 cm = m
12. 3814 mL = L
13. 1985 kg = t
14. 60 kg = t
15. 1796 m = km
16. 8145 kg = t
17. 156 492 mm = cm
18. 895 mL = L
19. 102 cm = m
20. 1740 mm = m
21. 102 mL = L
22. 60 cm = m



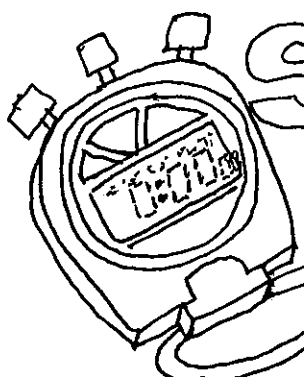
23. 84 m = km
24. 1985 cm = m
25. 40 mm = m
26. 1985 mm = m
27. 149 mm = cm



156.492	14.9	3.814	• 0.49
•	•	•	
1.8 •			• 0.5
0.8 •			• 2.689
0.01 •			• 0.001
0.098 •			• 0.008
0.04 •			• 0.06
0.084 •			• 8.145
0.102 •			• 0.895
1.02 •			• 1.74
15649.2			• 0.6
•			
1.796		1.985	19.85
•	•	•	



Stop Watch Tasks



① Work with a partner.
Record your times below:
You will also need a trundle wheel, basketball & rope.

Run 100 m

Hold yourself in this position

Hop 50 m

Skip rope 100 times

Skip 100 m

Complete 20 sit-ups

Shoot 10 goals

Bounce a ball 100 times

Time ② CONTEST!

Work with a partner.
Use a stopwatch to time each other in the activities shown below.
Record your time (A) and your partner's time (B) for each activity.
Find the difference between the times. Names: A: _____
B: _____

List 5 road safety rules

A

B

Difference

Write the prime numbers less than 50

A

B

Difference

Multiply 69 by 87

A

B

Difference

Write this week's spelling words

A

B

Difference

Graphing & Probability

① Find a spot inside the school, where you can see the cars going past. Record the colours of 50 cars going past. Produce a column graph displaying the results. Glue it on the page (hinge it in).

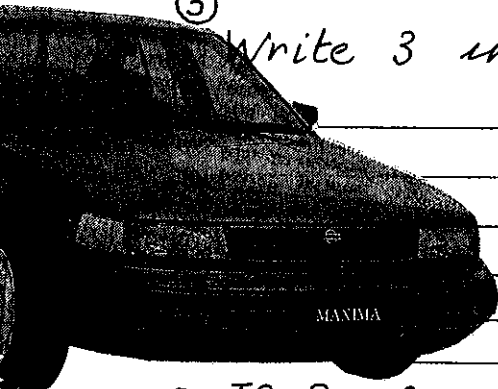
② From your graph, answer the following:

a) Out of a total of 50 cars, _____ were red.

b) It is more likely that more people drive _____ coloured cars than _____.

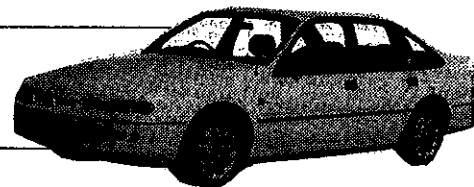
c) Out of the next 10 cars, _____ would probably be white.

③ Write 3 interesting facts from the graph:



④ If 3 of your friends were to buy a car, what colours would you predict they'd be? _____

Why? _____



⑤ When roads are up-graded, the Highways Department must predict the quantity and types of traffic.

Should the road be up-graded past the school? Conduct a 30min survey and graph your results to support your argument.

VOLUME

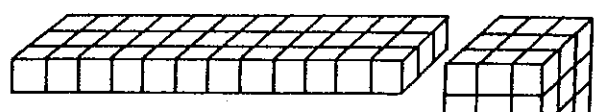
① Name one object that is about one cubic metre in volume (1m^3).

Draw it below and show its dimensions (lengths for length, width and height).

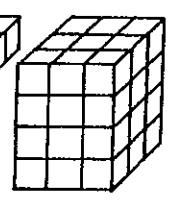
Now actually calculate its volume:

WHAT IS THE VOLUME?

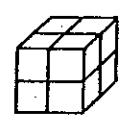
② Each cube in the illustrated solids has sides which are 1 metre in length.
 What is the volume of one cube?
 What is the volume of each of the solids?
 The smallest solid has a volume which is m^3
 The largest solid has a volume which is m^3
 The different between the volume of the largest and smallest solid is m^3



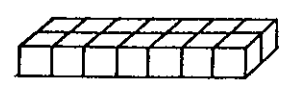
Volume = m^3



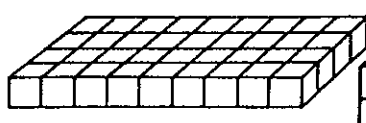
Volume



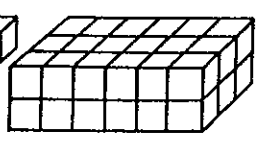
Volume =



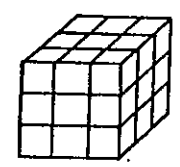
Volume



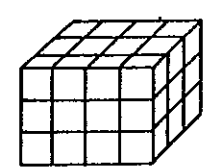
Volume



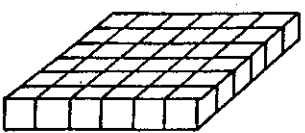
Volume



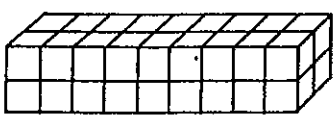
Volume



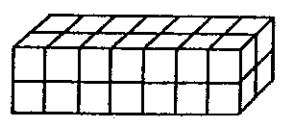
Volume



Volume



Volume

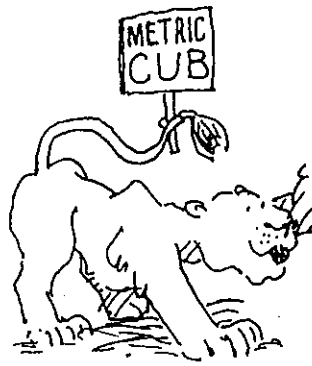


Volume



Volume

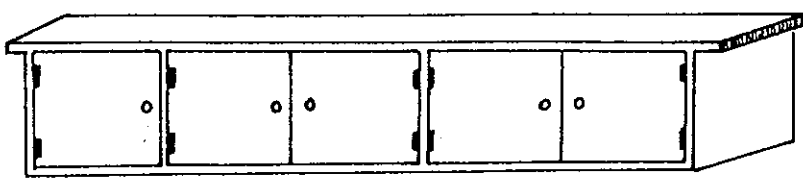
① Complete the table by naming objects to match the volumes stated.



Volumes of Objects	
Object	Volume
	About 10 m ²
	About 3 m ²
	More than 50 m ²
	Less than 1 m ²

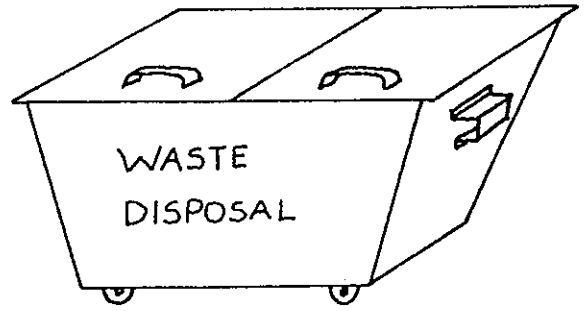


Match an object to each picture.
 Estimate the volume in square metres.
 Measure the volumes of the objects where possible.



Estimate

Measurement

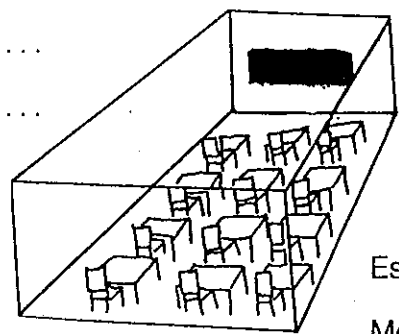


Estimate

Measurement

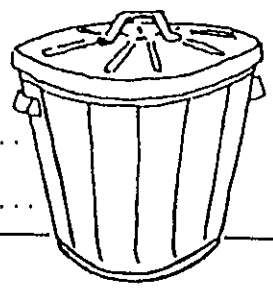
Estimate

Measurement

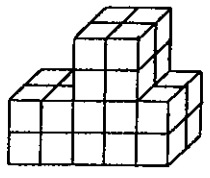


Estimate

Measurement

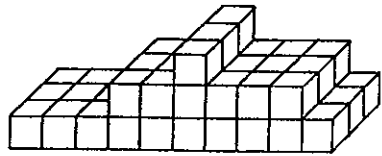


② Use small cubes to build a model of each of the following structures.
 Some of the cubes in the pictures are hidden but none of the hidden cubes is missing.
 If each cube represents one cubic metre, estimate and then measure the volume of each structure.
 In a design competition, the structure with the fifth largest volume won.
 Ring the winner.



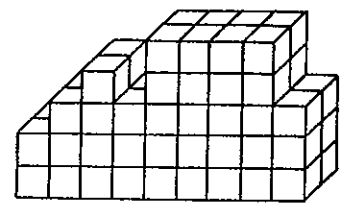
Estimate

Measurement



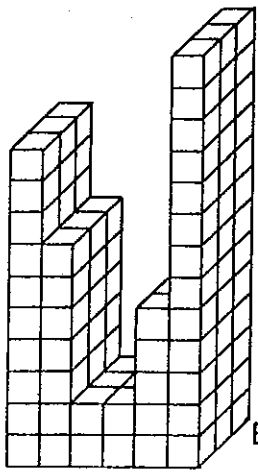
Estimate

Measurement



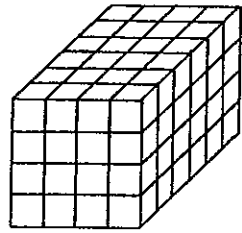
Estimate

Measurement



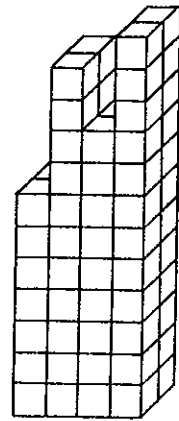
Estimate

Measurement



Estimate

Measurement



Estimate

Measurement