

## NUMBER 3

How many of these can you read correctly?

23 402

0.003

7.674

1 000 000

3 890 201

605 341

Write down these numbers in digits:

- a) Two hundred and 6
- b) Three thousand and seventeen
- c) Two million
- d) one hundred and forty two thousand
- e) 7 tenths

Write down these numbers in words:

- a) 408
- b) 10 004
- c) 500 000
- d) 0.16
- e) 23 000 000

4015.328

Multiplying and dividing by 10,100,1000....

**Complete the pattern:**

$$22 \times \quad = 22$$

$$22 \times \quad = 220$$

$$22 \times \quad = 2200$$

$$22 \times \quad = 22000$$

9.21                      101                      4.2

45                              76                              1005

204                              6.7

x10

9.21                      101                      4.2

45                              76                              1005

204                              6.7

x100

## Dividing by 10,100,1000

$$22 \div 1000 = 0.022$$

$$22 \div 100 = 0.22$$

$$22 \div 10 = 2.2$$

$$22 \div 1 = 22$$

$$9.21 \div 10 \\ = 0.921$$

$$101 \div 10 \\ = 10.1$$

$$4.2 \div 10 \\ = 0.42$$

$$45 \div 10 \\ = 4.5$$

$$76 \div 10 \\ = 7.6$$

$$1005 \div 10 \\ = 100.5$$

$$204 \div 10 = 20.4 \quad 6.7 \div 10 = 0.67$$

$$12.7 \div 100 \\ = 0.127$$

$$101 \div 100 \\ = 1.01$$

$$0.2 \div 100 \\ = 0.02$$

$$45 \div 100 \\ = 0.45$$

$$76 \div 100 \\ = 0.76$$

$$1005 \div 100 \\ = 10.05$$

$$204 \div 100 \\ = 2.04$$

$$6.7 \div 100 \\ = 0.067$$

# Multiplying by 20,200,2000....

4.21

8.42

84.2

101

202

2020

45

90

900

76

$\frac{140}{12}$

152

1520

1005

2010

20100

204

408

4080

6.7

134

$12 + 1.4 = 13.4$

x20

page 348 ex 8,9,10

Division

Easy

$$\begin{array}{r} 1210 \\ 3 \overline{)3630} \end{array}$$

$$\begin{array}{r} 1020 \\ 4 \overline{)4080} \end{array}$$

$$\begin{array}{r} 42301 \\ 2 \overline{)84602} \end{array}$$

$84602 \div 2$

$$\begin{array}{r} 2010 \\ 3 \overline{)6030} \end{array}$$

$8480 \div 4$

$$\begin{array}{r} 430321 \\ 2 \overline{)860642} \end{array}$$

$$\begin{array}{r} 2120 \\ 4 \overline{)8480} \end{array}$$

Medium

$$\begin{array}{r} 1040 \\ 3 \overline{)3120} \\ \phantom{00}1 \phantom{00} \end{array}$$

$$\begin{array}{r} 103 \\ 4 \overline{)412} \end{array}$$

$412 \div 4$

$$\begin{array}{r} 1725 \\ 2 \overline{)34502} \\ \phantom{00}1 \phantom{00} \phantom{00} \end{array}$$

$56410 \div 2$

$$\begin{array}{r} 1502 \\ 3 \overline{)4506} \\ \phantom{00}1 \phantom{00} \end{array}$$

$$\begin{array}{r} 240 \\ 4 \overline{)960} \\ \phantom{00}1 \phantom{00} \end{array}$$

$$\begin{array}{r} 28205 \\ 2 \overline{)56410} \\ \phantom{00}1 \phantom{00} \phantom{00} \end{array}$$

Hard

$$\begin{array}{r} 9348 \\ 3 \overline{)28044} \\ \phantom{00}1 \phantom{00} \phantom{00} \end{array}$$

$$\begin{array}{r} 1525 \\ 4 \overline{)6100} \\ \phantom{00}2 \phantom{00}1 \phantom{00}2 \phantom{00} \end{array}$$

$$\begin{array}{r} 28655 \\ 2 \overline{)57310} \\ \phantom{00}1 \phantom{00}1 \phantom{00}1 \phantom{00} \end{array}$$

$57310 \div 2$

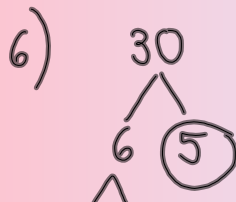
$$\begin{array}{r} 2107 \\ 3 \overline{)6321} \\ \phantom{00}2 \phantom{00} \end{array}$$

$900 \div 4$

$$\begin{array}{r} 25926 \\ 2 \overline{)51852} \\ \phantom{00}1 \phantom{00}1 \phantom{00}1 \phantom{00} \end{array}$$

$$\begin{array}{r} 225 \\ 4 \overline{)900} \\ \phantom{00}1 \phantom{00}2 \phantom{00} \end{array}$$

Worksheet for Tuesday



Try these:

1)  $453 \div 3$

2)  $456 \div 6$

3)  $721 \div 7$

4)  $4675 \div 5$

5)  $9297 \div 9$

Ext

6)  $9208 \div 8$

7)  $1287 \div 9$

8)  $8344 \div 7$

## Dividing by 20.

Divide by 2 and by 10.

$$\begin{array}{r} 240 \\ 120 \overline{)240} \\ \hline \end{array}$$

$240 \div 20 = 12$

$$\begin{array}{r} 460 \\ 230 \overline{)460} \\ \hline \end{array}$$

$460 \div 20 = \underline{\underline{23}}$

$$\begin{array}{r} 68 \\ 34 \overline{)68} \\ \hline \end{array}$$

$3 \cdot 4$

$$\begin{array}{r} 300 \\ 150 \overline{)300} \\ \hline \end{array}$$

$15$

$$\begin{array}{r} 900 \\ 450 \overline{)900} \\ \hline \end{array}$$

$45$

$$\begin{array}{r} 84 \\ 42 \overline{)84} \\ \hline \end{array}$$

$4 \cdot 2$

$$\begin{array}{r} 500 \\ 250 \overline{)500} \\ \hline \end{array}$$

$25$

$$\begin{array}{r} 510 \\ 255 \overline{)510} \\ \hline \end{array}$$

$25 \cdot 5$

## Divide by 30

$$\begin{array}{r} 100 \\ 3 \overline{)300} \\ \hline \end{array}$$

a)  $300 \div 30 = 10$

b)  $360 \div 30 = 12$

c)  $120 \div 30 = 4$

d)  $420 \div 30 = 14$

e)  $510 \div 30 = 17$

Try these:

1)  $450 \div 90 = 5$

2)  $7070 \div 70 = 101$

3)  $2460 \div 60 = 70 \cdot 3$

4)  $3515 \div 50 = 102$

5)  $8160 \div 800$

Ext:  $= 85 \cdot 30$

6)  $34120 \div 400$

7)  $560 \div 800$

8)  $81620 \div 700$

$$\begin{array}{r} 50 \\ 9 \overline{)450} \\ \hline \end{array}$$
$$\begin{array}{r} 703 \\ 5 \overline{)3515} \\ \hline \end{array}$$

Work out as many of these as you can.

$$44 \times 10 = 440$$

$$48 \div 100 = 0.48$$

$$45 \div 100 = 0.45$$

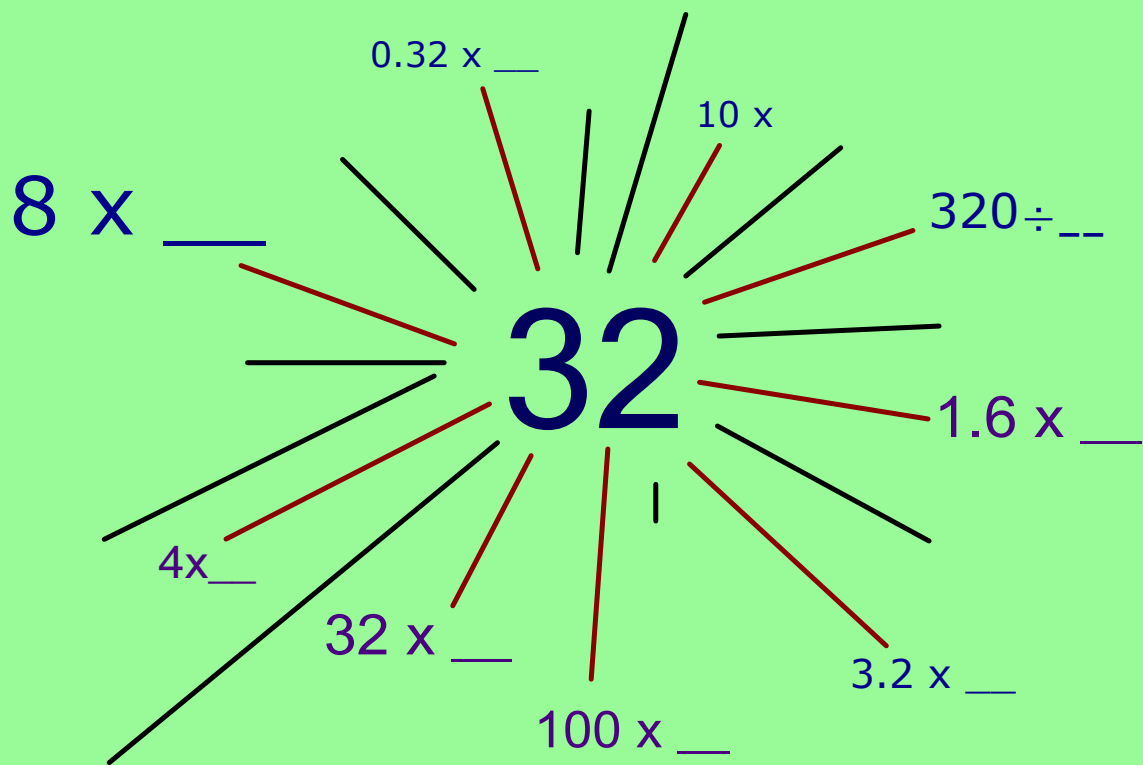
$$0.3 \times 100 = 30$$

$$7 \div 100 = 0.07$$

$$36 \times 200 = 7200$$

$$44 \times 1000 = 44000$$

Complete the sums and add 10 of your own  
(multiplication or division)



## Ordering decimals

Holly Jake Jess Max Nicolina

\_\_\_\_\_

Andrew Ann Annabelle Anne

## Ordering decimals

0.09999 0.5 0.59 0.595 5.5

Green	pink	yellow	purple
0.02	0.82	0.09	1.01
0.12	2.099	0.79	1.011
0.202	2.8	0.9	1.101
0.29	2.82	0.99	1.11

bbc



## Adding and Subtracting Decimals

Keep the decimal points underneath each other!

$$2.34 + 83.1$$

$$52.67 - 3.083$$

1.  $5.64 + 2.431$

2.  $56.8 - 32.71 = 24.09$

3.  $120 + 3.5601 = 123.5601$

4.  $12 - 4.5 = 7.5$

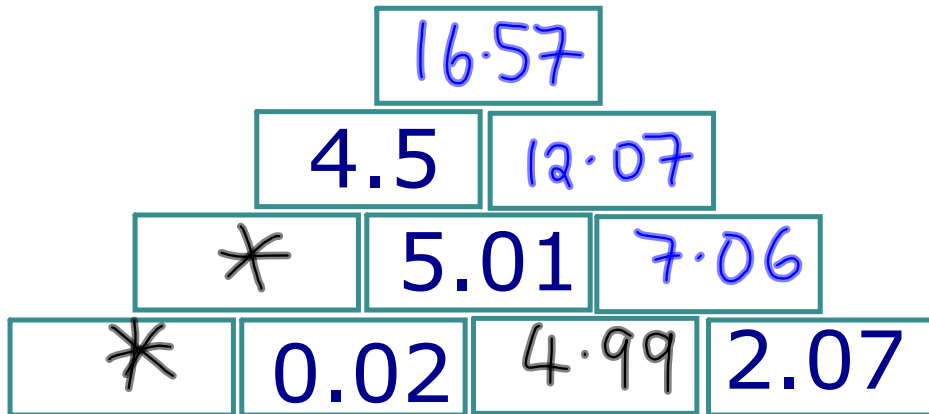
5.  $54.97 + 23.865$



↘ This one is hard!  
Take it slowly!

6.  $12.01 - 7.945$

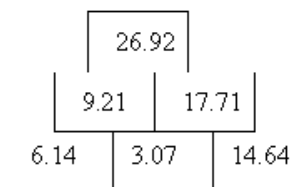
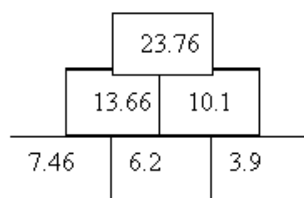
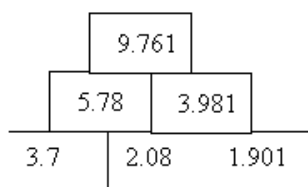
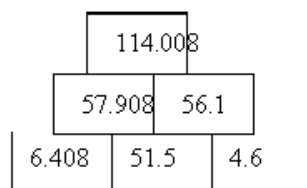
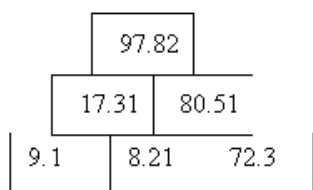
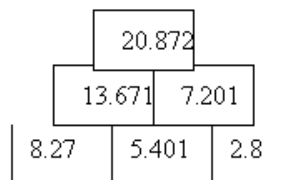
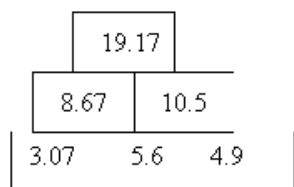
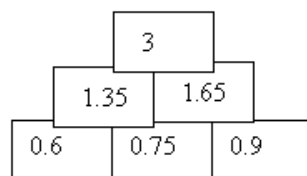
Ext



$$\begin{array}{r} 5.01 \\ - 0.02 \\ \hline \end{array}$$

## Decimal Pyramids (ext)

Add bricks next to each other to form the brick on top.  
The first one has been started for you.



## Subtracting decimals

1)  $3.7 - 2.8$

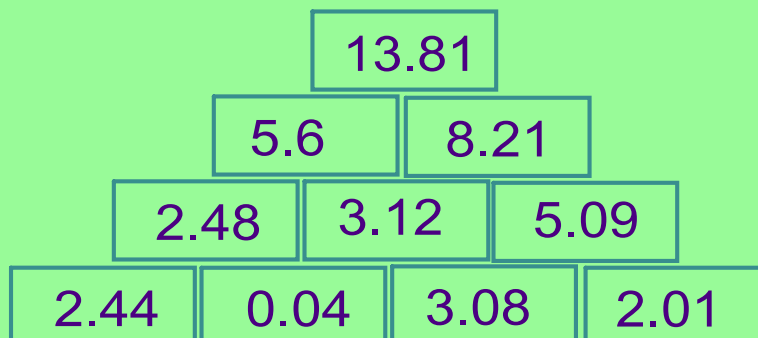
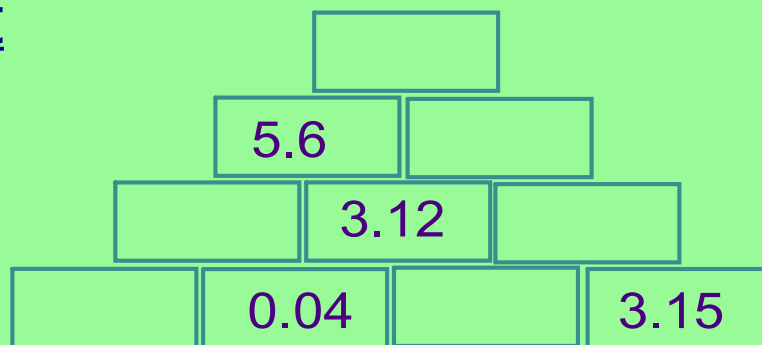
2)  $4.5 - 2.9$

3)  $4.5 - 1.04$

4)  $12.2 - 6.09$

5)  $34.62 - 7.891$

### Ext



- 1)  $0.9 + 0.1 = 1$
- 2)  $0.5 - 0.4 = 0.1$
- 3) Write three tenths in decimals.  $0.3$
- 4) Write 0.2 in fractions.  $\frac{2}{10}$
- 5)  $1.0 - 0.3 = 0.7$
- 6) What is nine tenths subtract 0.3?  $0.6$   $\frac{6}{10}$
- 7)  $0.4 + 0.4 = 0.8$
- 8)  $0.8 + 0.2 = 1$
- 9)  $0.8 - 0.3 = 0.5$
- 10)  $0.3 + 0.2 - 0.4 = 0.1$
- 11)  $0.8 - 0.2 = 0.6$
- 12) What is eight tenths add 0.1?  $0.9$   $\frac{9}{10}$
- 13) Write 0.1 in fractions.  $\frac{1}{10}$
- 14)  $0.1 + 0.2 + 0.3 = 0.6$   $\frac{6}{10}$
- 15)  $0.6 - 0.4 = 0.2$
- 16) What is 0.4 add three tenths?  $0.7$   $\frac{7}{10}$
- 17) Write nine tenths in decimals.  $0.9$
- 18)  $0.6 + 0.3 = 0.9$
- 19) What is five tenths subtract 0.3?  $0.2$
- 20)  $0.1 + 0.8 = 0.9$
- 21)  ~~$0.6 + 0.2 + 0.1 = 0.9$~~
- 22) What is five tenths add 0.5, subtract 0.2?
- 23) Write 0.7 in fractions.
- 24) What is 0.2 add seven tenths?
- 25)  $0.3 + 0.6 - 0.2 - 0.5 =$

- 1)  $0.9 + 0.1 = 1$
- 2)  $0.5 - 0.4 = 0.1$
- 3) Write three tenths in decimals = 0.3
- 4) Write 0.2 in fractions =  $\frac{2}{10}$
- 5)  $1.0 - 0.3 = 0.7$
- 6) What is nine tenths subtract 0.3? 0.6
- 7)  $0.4 + 0.4 = 0.8$
- 8)  $0.8 + 0.2 = 1.0$
- 9)  $0.8 - 0.3 = 0.5$
- 10)  $0.3 + 0.2 - 0.4 = 0.1$
- 11)  $0.8 - 0.2 = 0.6$
- 12) What is eight tenths add 0.1? 0.9
- 13) Write 0.1 in fractions.  $\frac{1}{10}$
- 14)  $0.1 + 0.2 + 0.3 = 0.6$
- 15)  $0.6 - 0.4 = 0.2$
- 16) What is 0.4 add three tenths? 0.7
- 17) Write nine tenths in decimals 0.9
- 18)  $0.6 + 0.3 - 0.2 = 0.7$
- 19) What is five tenths subtract 0.3? 0.2
- 20)  $0.1 + 0.8 = 0.9$
- 21)  $0.6 + 0.2 + 0.1 = 0.9$
- 22) What is five tenths add 0.5, subtract 0.2? 0.8
- 23) Write 0.7 in fractions. =  $\frac{7}{10}$
- 24) What is 0.2 add seven tenths? 0.9
- 25)  $0.3 + 0.6 - 0.2 - 0.5 = 0.2$

Using Decimals to solve problems.

**Find the total length of two snakes put end to end if the mother is 1m 3cm and the baby 9.5 cm.**

**What is the difference in their lengths?**

**If the mother has a repeating pattern on her skin that is 20cm long how many complete cycles of the pattern are there?**

**If the mother had 11 babies all 9.5cm and they were placed alongside her, end-to-end, would they be longer or shorter than her?**

How many of these can you do in 3 minutes?

$$0.6 \times 100 = 60$$
$$6 \div 100 = 0.06$$
$$0.06 \times 200 = 12$$

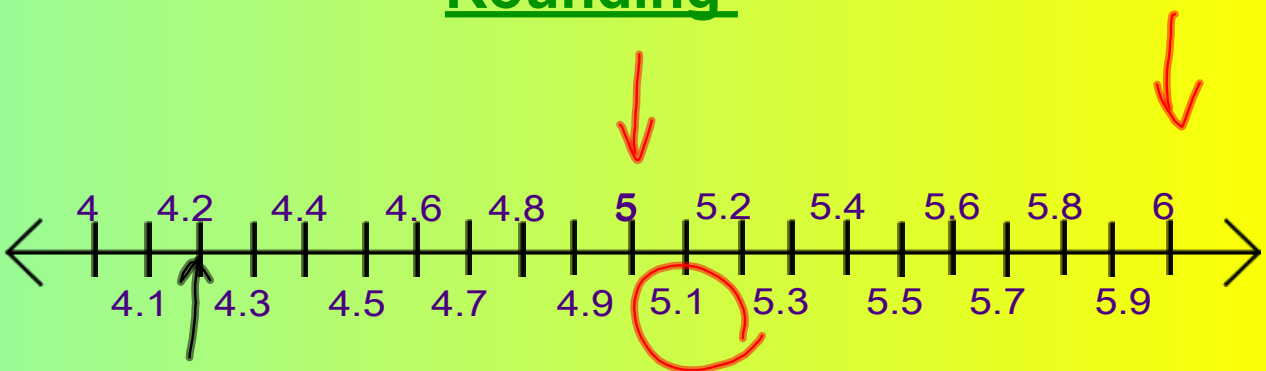
$$0.6 \div 100 = 0.006$$
$$7 \times 10 = 70$$

$$0.6 \times 200 = 120$$
$$460 \div 20 = 23$$
$$6000 \div 200 = 30$$

level 3 1-4  
level 4: 4-7  
level 5 : 8+

$$0.006 \div 100 = 0.00006$$
$$6 \times 200 = 1200$$
$$23 \times 1000 = 23000$$

## Rounding



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

page 40 Qu 1-3

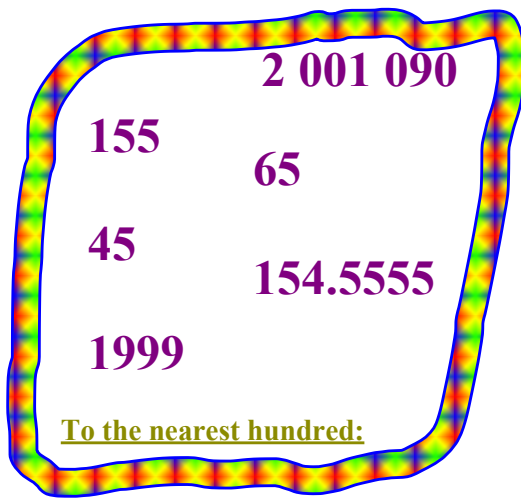
## Estimating

$$2.1 \times 6.9 \approx 2 \times 7 = 14$$

$$6.8 \times 3.2 \approx 7 \times 3 = 21$$

$$9.9 \times 2.2 \approx 10 \times 2 = 20$$

Rounding to a fixed number of decimal places.



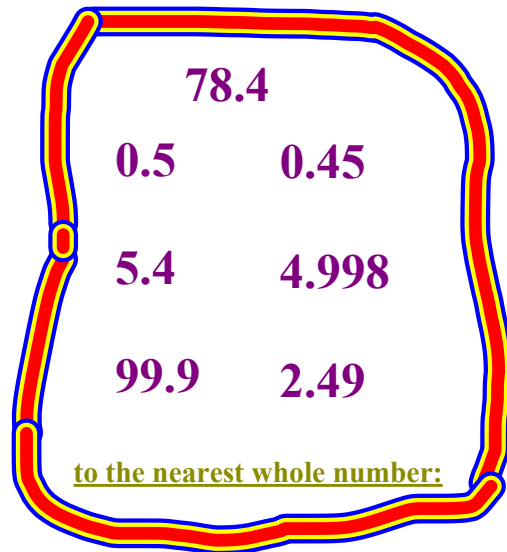
2 001 090

155                      65

45                        154.5555

1999

To the nearest hundred:



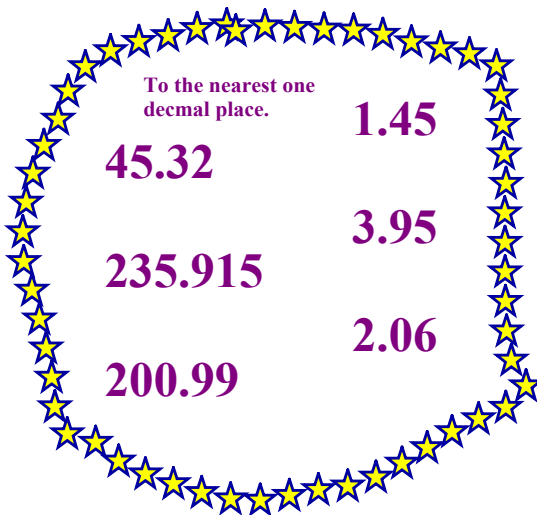
78.4

0.5            0.45

5.4            4.998

99.9          2.49

to the nearest whole number:

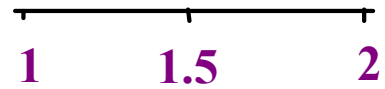


To the nearest one decimal place.

45.32                      1.45

235.915                    3.95

200.99                     2.06



To round to one dp  
look at the number in  
the second dp.  
no < 5, leave it;  
no ≥ 5, round up.

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Worksheet.wow. decimal  
place match level 6

Plenary : see attachment

## Rounding to 1 decimal place

Use your calculator to find the square root...

	calculator display	to the nearest whole number	to one decimal place
$\sqrt{1}$	1	1	1.0
$\sqrt{2}$	1.41421...	1	1.4
$\sqrt{3}$	1.73205	2	1.7
$\sqrt{4}$	2	2	2.0
$\sqrt{5}$			
$\sqrt{6}$			
$\sqrt{7}$			
$\sqrt{8}$			
$\sqrt{9}$			
$\sqrt{10}$			
$\sqrt{11}$			
$\sqrt{12}$			

estimating  
page 40

$$2.3 \times 0.4 = 0.92 \quad 23 \times 0.4 = 9.2$$

$$23 \times 4 = 92$$

80  
12

$$2.3 \times 4 = 9.2 \quad 0.23 \times 4 = 0.92$$

## Decimals and Multiplication

$$3.1 \times 0.4 = 1.24 \quad 31 \times 0.4 = 12.4$$

$$31 \times 4 = 124$$

$$3.1 \times 4 = 12.4 \quad 0.31 \times 4 = 1.24$$

## Long multiplication

$$2.6 \times 41 = 106.6$$

$$\begin{array}{r|rr} & 20 & 6 \\ \hline 40 & 800 & 240 \\ 1 & 20 & 6 \\ \hline & 820 & + 246 \\ & & = 1066 \end{array}$$

$$3.4 \times 52 = 176.8 \checkmark$$

$$\begin{array}{r|rr} & 50 & 2 \\ \hline 30 & 1500 & 60 \end{array}$$

$$5.1 \times 72 = 367.2$$

$$\begin{array}{r|rr} & 200 & 8 \\ \hline 4 & 200 & 8 \\ \hline & 1700 & + 68 = 1768 \end{array}$$

$$34 \times 4.5 = 153.0$$

## Multiplication

$$\begin{array}{r|l} 23 \times 45 & \begin{array}{l} 40 \quad 5 \\ \hline 20 \quad 800 \quad 100 \\ 3 \quad 120 \quad 15 \\ \hline 920 + 115 = 1035 \end{array} \end{array} \quad \begin{array}{l} 2.3 \times 45 \\ = 103.5 \end{array}$$

1)  $34 \times 21 = 714$

b)  $3.4 \times 2.1 = 7.14$

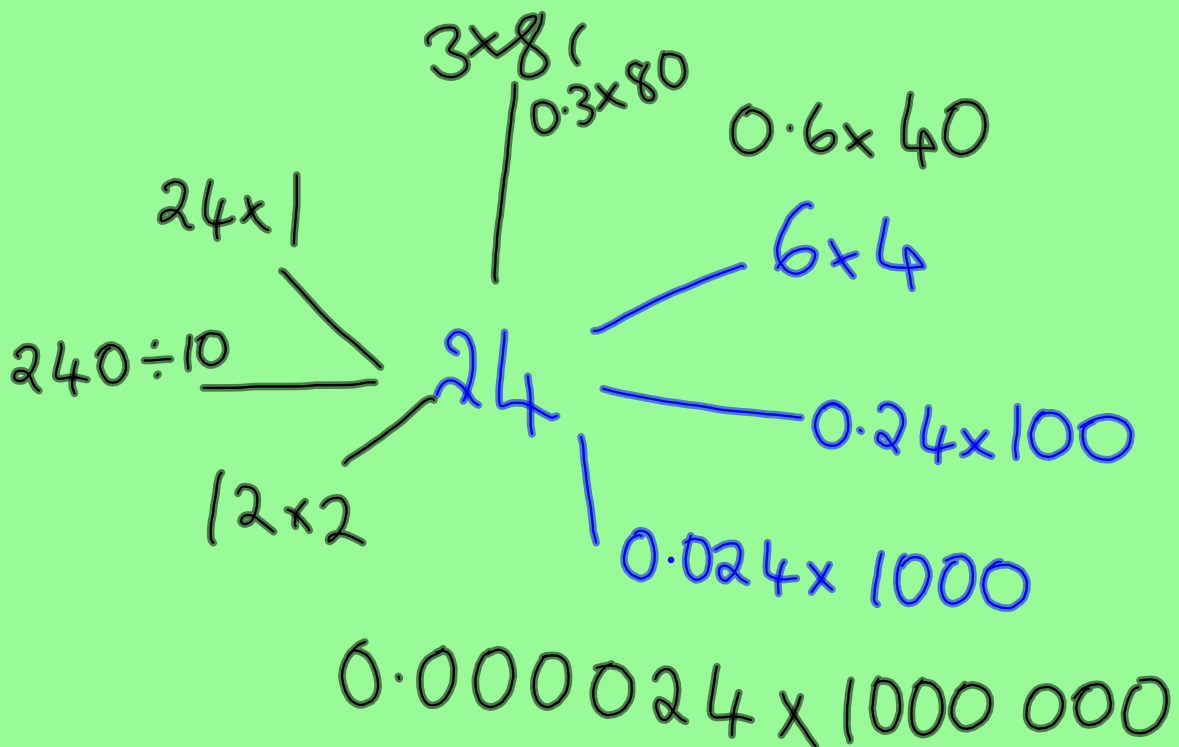
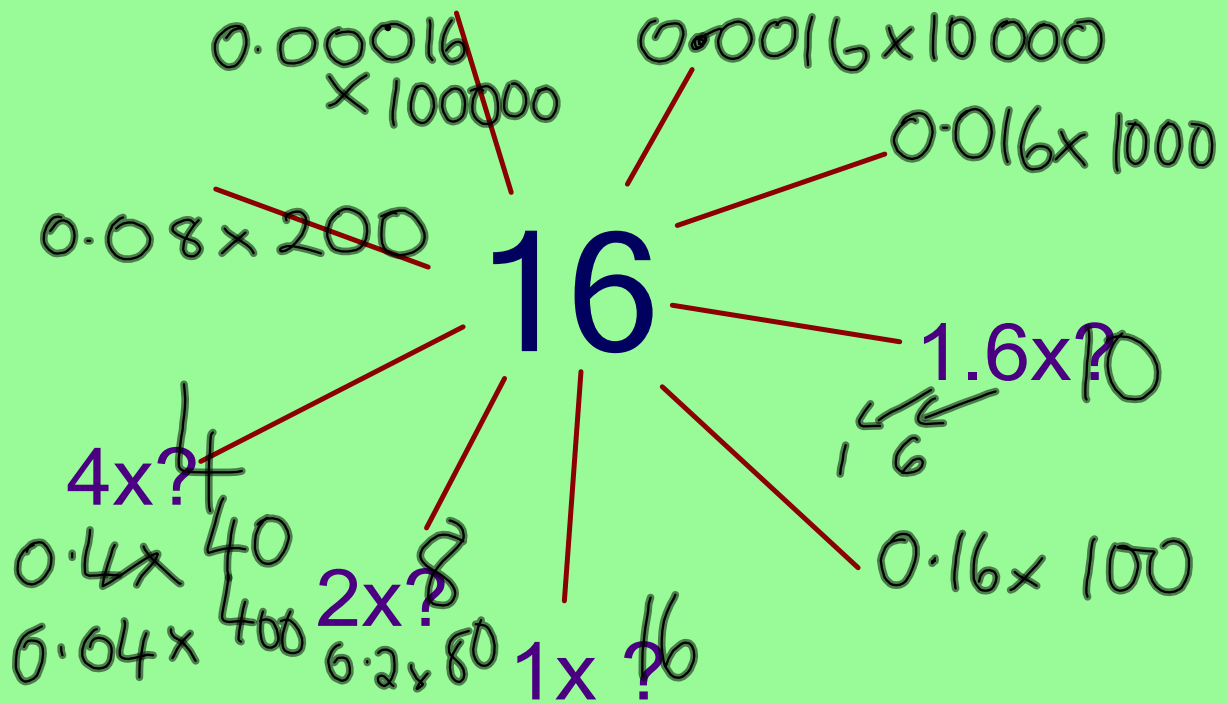
2)  $54 \times 32 = 1728$

b)  $0.54 \times 32 = 17.28$

3)  $71 \times 43 = 3053$

c)  $7.1 \times 0.43 = 3.053$

How many multiplication sums can you construct with an answer of 16?



## Long Division

$$252 \div 12 = 21$$

$$\begin{array}{r} 12 \times 10 = 120 \\ 12 \times 10 = 120 \\ \hline 240 \\ 12 \\ \hline 252 \end{array}$$

$$583 \div 53 = 11$$

$$\begin{array}{r} 53 \times 10 = 530 \\ 53 \times 1 = 53 \\ \hline 583 \end{array}$$

$$1260 \div 63 = 20$$

$$1804 \div 82 = 22$$

$$\begin{array}{r} 82 \times 10 = 820 \\ 82 \times 10 = 820 \\ \hline 1640 \\ 82 \times 1 = 82 \\ \hline 1722 \\ 82 \times 1 = 82 \\ \hline 1804 \end{array}$$

$$\begin{array}{r} 63 \times 10 = 630 \\ 63 \times 10 = 630 \\ \hline 1260 \end{array}$$

1)  $748 \div 68$

2)  $792 \div 36$

3)  $1705 \div 55$

**Write a word problem that requires you to do the sum  $26 \div 6$ ?**



**When might the answer be 4?**

**When might the answer be 5?**

Read and write positive integer powers of 10; multiply and divide integers and decimals by 0.1, 0.01.

Order decimals

Round positive numbers to any given power of 10; round decimals to the nearest whole number or to one or two decimal places.

Consolidate and extend mental methods of calculation, working with decimals, squares and square roots, cubes and cube roots; solve word problems mentally.

Consolidate standard column procedures for addition and subtraction of integers and decimals with up to two places.

**Use standard column procedures for multiplication and division of integers and decimals, including by decimals such as 0.6 or 0.06; understand where to position the decimal point by considering equivalent calculations.**

Make and justify estimates and approximations of calculations

Enter numbers and interpret the display of a calculator in different contexts (negative numbers, fractions, decimals, percentages, money, metric measures, time).

Check a result by considering whether it is of the right order of magnitude and by working the problem backwards

Carry out more difficult calculations effectively and efficiently using the function keys of a calculator for sign change, powers, roots and fractions; use brackets and the memory.

## Attachments

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rounding to 1 dp.xbk

15RandNos.xls