



W.C. 27th April 2020

<https://www.bbc.co.uk/bitesize/tags/zhgppg8/year-5-lessons/1>

Maths ANSWERS

Monday

Prime Numbers and Square Numbers

PRIME NUMBERS TO 100



Prime numbers are numbers that are only divisible by themselves and by 1.

	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

There are 25 prime numbers between 1 and 100.

Square Number Grid 10 x 10

X	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Mild

Complete the table.

Number	Factors	Is the number prime?
5	1 and 5	Yes
9	1, 3, 9	No
11	1, 11	Yes
14	1, 2, 7, 14	No
15	1, 3, 5, 15	No
19	1, 19	Yes

A prime number has two factors: 1 and itself.

List the prime numbers up to 20

2, 3, 5, 7, 11, 13, 17, 19

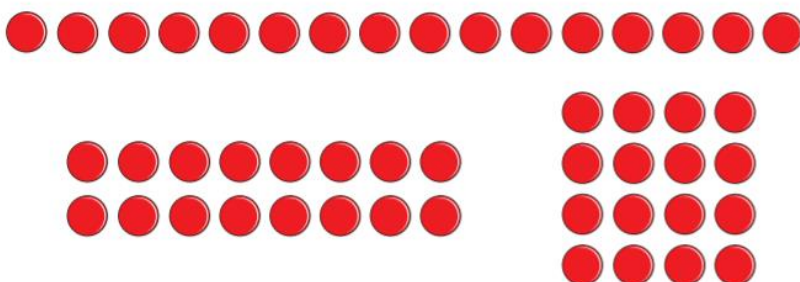
Here are sequences of consecutive prime numbers.

Complete the sequences.

a) 7, 11, 13, 17, 19

b) 37, 31, 29, 23, 19

a) Use 16 counters to make these arrays.



b) What do you notice about the shape of one of the arrays?

It's a square.

c) Is 16 a square number? How do you know?

Which of these numbers are square numbers?

Circle your answers.

4 10 18 25

Medium

Colour all the prime numbers.

51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80

Here are some numbers.

126	175	2,378	777	381	9,000
-----	-----	-------	-----	-----	-------



Jack

The numbers are big. It's hard to check if they are prime.

I can tell quickly that none of these numbers are prime.



Annie

How does Annie know that none of the numbers are prime?

126, 2378 and 9000 have 2 as a factor so aren't prime. 175 has 5 as a factor. 777 has 7 as a factor. $3+8+1=12$ so 3 is a factor of 381

Spicy

1. Can you write out all the prime numbers from 1-100? Remember the rule above.

PRIME NUMBERS TO 100



Prime numbers are numbers that are only divisible by themselves and by 1.

	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

There are 25 prime numbers between 1 and 100.

Mo and Alex are talking about prime numbers.



Mo

Prime numbers are always odd.

I think prime numbers can be even.



Alex

Who is correct? Alex

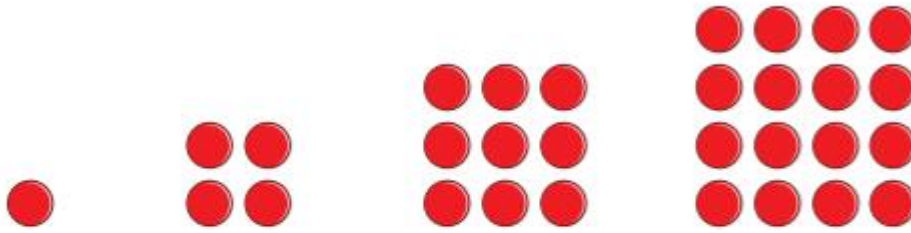
How do you know?

2 is even and prime. It is the only even
prime number.

Square Numbers

The arrays below show a sequence.

a) Complete the number sentences. Use the arrays to help you.



$$1 = \boxed{1} \quad 2 \times 2 = \boxed{4} \quad 3 \times \boxed{3} = \boxed{9} \quad \boxed{4} \times \boxed{4} = \boxed{16}$$

b) What do these numbers have in common?

They're all square numbers.

c) Draw the next two numbers in the sequence and write a number sentence for each.

5x5=25

6x6=36

- 1 Huan is celebrating his birthday.
His age is a square number.
Last year he was a multiple of 12
Next year he will be a multiple of 10
How old is Huan?

49

Tuesday

Multiply and divide by 10, 100 and 1,000

Mild

1 Complete the multiplications.

a)

Th	H	T	O
			7

$7 \times 10 = \boxed{70}$

b)

Th	H	T	O
		3	9

$39 \times 10 = \boxed{390}$

c)

Th	H	T	O
	2	0	5

$205 \times 10 = \boxed{2,050}$

d) What happens to the digits when you multiply by 10?

They move one place to the left.

3 Multiply each number by 100 and then by 1,000

a)

HTh	TTh	Th	H	T	O
					9

$9 \times 100 = \boxed{900}$

$9 \times 1,000 = \boxed{9,000}$

b)

HTh	TTh	Th	H	T	O
				1	6

$16 \times 100 = \boxed{1,600}$

$16 \times 1,000 = \boxed{16,000}$

c)

HTh	TTh	Th	H	T	O
			2	4	5

$245 \times 100 = \boxed{24,500}$

$245 \times 1,000 = \boxed{245,000}$

d) Explain to a partner how you multiply a number by 100

Ask them to explain how to multiply by 1,000

Complete the division sentences.

a)

Th	H	T	O
		6	0

$$60 \div 10 = \boxed{6}$$

b)

Th	H	T	O
	4	9	0

$$490 \div 10 = \boxed{49}$$

c)

Th	H	T	O
1	4	9	0

$$1,490 \div 10 = \boxed{149}$$

d) What happens to the digits when you divide a number by 10?

They move one place to the right.

Complete the divisions.

a)

HTh	TTh	Th	H	T	O
			9	0	0

$$900 \div 100 = \boxed{9}$$

b)

HTh	TTh	Th	H	T	O
	1	6	0	0	0

$$16,000 \div 100 = \boxed{160}$$

c)

HTh	TTh	Th	H	T	O
		9	0	0	0

$$9,000 \div 1,000 = \boxed{9}$$

d)

HTh	TTh	Th	H	T	O
7	6	8	0	0	0

$$768,000 \div 1,000 = \boxed{768}$$

Medium

Complete the multiplication sentences.

- a) $9 \times 10 =$ e) $\times 10 = 320$
b) $54 \times 10 =$ f) $10 \times$ $= 1,350$
c) $10 \times 13 =$ g) $20 \times 10 =$
d) $126 \times 10 =$ h) $\times 10 = 5,000$

Complete the multiplication sentences.

- a) $45 \times 100 =$ c) $41 \times 10 =$
 $52 \times 100 =$ $41 \times 100 =$
 $70 \times 100 =$ $41 \times 1,000 =$
b) $612 \times 100 =$ d) $10 \times 952 =$
 $715 \times 100 =$ $100 \times 952 =$
 $720 \times 100 =$ $1,000 \times 952 =$

Complete the division sentences.

- a) $4,500 \div 10 =$ c) $\div 10 = 76$
 $62,000 \div 10 =$ $\div 100 = 76$
 $739,300 \div 10 =$ $\div 1,000 = 76$
b) $4,500 \div 100 =$ d) $\div 1,000 = 30$
 $62,000 \div 100 =$ $\div 1,000 = 300$
 $739,300 \div 100 =$ $\div 1,000 = 3,000$

Spicy

Complete the multiplication sentences.

a) $52 \times \boxed{100} = 5,200$

f) $\boxed{10} \times 370 = 3,700$

b) $95 \times \boxed{10} = 950$

g) $\boxed{82} \times 100 = 8,200$

c) $136 \times \boxed{10} = 1,360$

h) $\boxed{820} \times 100 = 82,000$

d) $272 \times \boxed{1,000} = 272,000$

i) $\boxed{3,900} \times 10 = 39,000$

e) $6,200 = \boxed{100} \times 62$

j) $1,000 \times \boxed{80} = 80,000$

Mrs Hall owns a bookshop.

- In January, she sold 145 books.
- In February she sold 10 times as many books.
- In March she sold 10 times as many books as in February.

How many books did Mrs Hall sell in March?

Show your workings.

$\boxed{14,500}$

In 2019, 568,000 houses were built.

In 2018, 10 times fewer houses were built.

In 2017, 100 times fewer houses were built.

a) How many houses were built in 2018?

$\boxed{56,800}$ houses

b) How many houses were built in 2017?

$\boxed{5,680}$ houses

c) How many houses were built between 2017 and 2019?

$\boxed{630,480}$ houses

Wednesday

Short and long multiplication

Mild, Medium and Spicy - Log on to Timetable Rockstars and compete in the Battles we have set up!



Be sure to check the answers for this task on the BBC Bitesize website.

Thursday

Short Division

Mild

Use the place value chart to work out $8,404 \div 4$

Th	H	T	O
			
			

		2	1	0	1	
	4	8	4	0	4	

$$8,404 \div 4 = 2,101$$

$5,296 \div 4 =$ 1,324

Th	H	T	O

		1	3	2	4	
	4	5	2	9	6	

$6,078 \div 6 =$ 1,013

Th	H	T	O

		1	0	1	3	
	6	6	0	7	8	

Medium

Complete the divisions.

a)

			0	7	1	2
	5	3	5	6	0	

d)

			1	6	3	1
	6	9	7	8	6	

b)

			0	3	0	4
	9	2	7	3	6	

e)

			1	5	6	1
	3	4	6	8	3	

c)

			1	6	3	1
	4	6	5	2	4	

f)

			2	0	7	9
	1	2	0	7	9	

Could you have calculated the answer to part f) more efficiently?

Find the missing digits.

a)

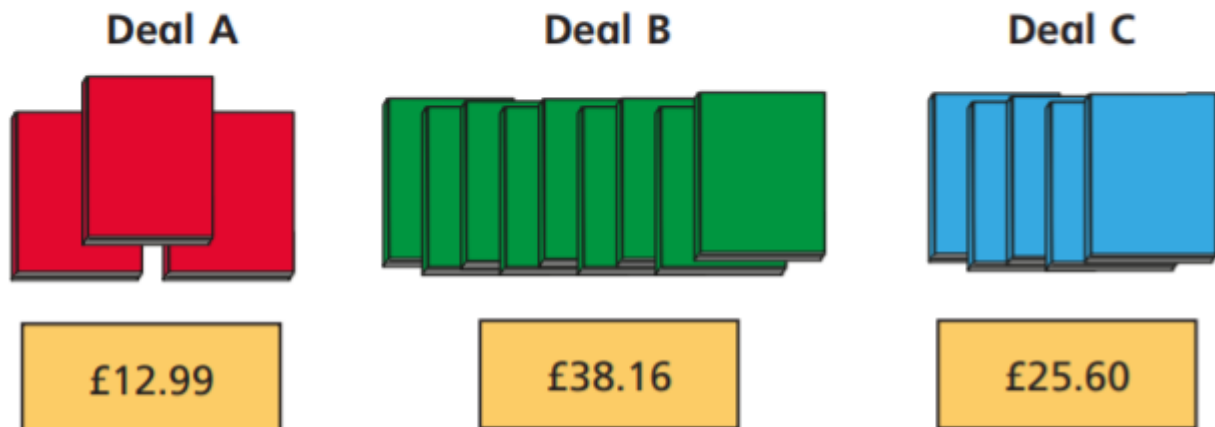
		2	2	4	1	
	4	8	9	6	4	

b)

		3	2	6	2	
	2	6	5	2	4	

Spicy

Books are available to buy in three different deals.



Which is the best deal?

Deal B

Show your workings.

Multi-Step Division Word Problems Challenge Cards

5. A local charity has 3 fundraising events. The events raise £176, £81 and £309 each. After costs of £92 are deducted, the money is shared equally among 3 local children's group. How much does each group receive?

£158.00

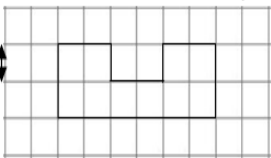
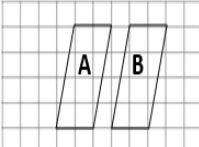
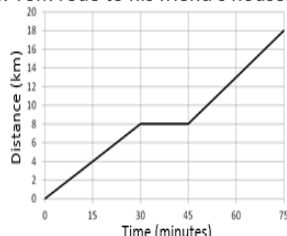
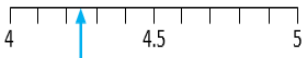


Friday

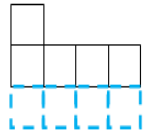
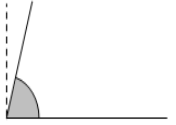
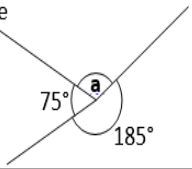
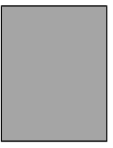
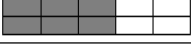
Today you may wish to challenge yourself with the online challenges or the Key Skills tasks! But make sure to have plenty of fun with maths today!

Key Skills and Rockstars

Mild

1. What is the missing number? 18 24 30 42	4:1 36	11. $7 \times 11 =$	4:9 77	21. What is the area of this shape? 	4:20 10cm²
2. What is the missing number? 7,000 8,000 9,000	4:1 10,000	12. Circle the sum that is the same as 27×12 : $3 \times 4 \times 9$ <u>$3 \times 9 \times 12$</u>	4:10 $3 \times 9 \times 12$		
3. Round this number to the nearest 100: 5,731	4:2 5,700	13. $293 \times 7 =$	4:11 2,051	22. Circle the name that describes the smallest angle. Right angle Obtuse angle <u>Acute angle</u>	4:24 Acute angle
4. What is 1,000 less than 3,293?	4:2 2,293	14. To work out 53×8 you could do: $\times 8 + 3 \times$	4:12 50, 8		
5. What is 3 less than 1?	4:3 -2	15. Circle the equivalent fraction to $\frac{1}{7}$. $\frac{3}{28}$ $\frac{5}{35}$ $\frac{7}{56}$	4:13 $\frac{5}{35}$	23. To transform shape A onto B: Translate A units to the . 	4:27 3, right
6. What is the value of the 2 in this number? 3,296	4:4 200	16. Complete the sequence: $\frac{22}{100}$ $\frac{23}{100}$ $\frac{24}{100}$	4:14 $\frac{25}{100}$		
7. Write the number 37 in Roman numerals.	4:5 XXXVII	17. $\frac{9}{5} + \frac{2}{5}$	4:15 $\frac{11}{5}$	24. Tom rode to his friend's house. 	4:29 15 mins
8. $1,235 + 824 =$	4:6 2,059	18. Write 0.5 as a fraction. 	4:16 $\frac{1}{2}$		
9. Write the sum to check $1,930 + 383 = 2,313$: $2,313$ $1,930$ 383	4:7 $\rightarrow =$	19. $8 \div 100 =$	4:17 0.08	Using the distance - time graph, how long did Tom rest for?	
10. There are 213 people on a train. 28 get on & 49 get off. How many now?	4:8 192	20. Label 4.25cm on the ruler section: 	4:18 Arrow	25. How much further was the 2nd part of Tom's journey than the first?	4:30 4km
Total (A)		Total (B)		Total (C)	

Medium and Spicy

A: Place Value, Add and Subtract			B: Multiply, Divide and Fractions			C: Geometry and Problem Solving		
1. Write < or > to make this correct: 129,389 295,837	5:1	<	11. Circle all the multiples of 9. 3 <u>18</u> <u>27</u> 34	5:8	18, 27	21. Which of these three numbers is the largest ? a. 0.4 b. 0.348 c. 0.54	5:18	c
2. Write 130,011 in words.	5:1	One hundred and thirty thousand and eleven	12. The number 20 has two prime factors . What are they?	5:9	2, 5	22. This net of a cube is missing a square. Add the <u>square</u> . 	5:24	Square added in any position
3. Round 163,824 to the nearest hundred .	5:2	163,800	13. $5,128 \div 4$	5:10	1,282	23. Estimate the size of this angle: 	5:25	70° - 80°
4. What is the missing number? 32,475 31,475 29,475	5:2	30,475	14. $2,050 \div 1000$	5:11	2.05(0)	24. Calculate the missing angle labelled a : 	5:26	100°
5. Find the difference in temperatures. London -5°C Glasgow 4°C	5:3	9°C	15. Complete the sequence of square numbers . 1 4 16	5:12	9	25. The perimeter of <u>this</u> square is 44cm. How long is each <u>side</u> ? 	5:27	11cm
6. Write this number in Roman Numerals: 1,255	5:4	MCCLV	16. Write < , = or > to make this correct: $\frac{2}{3}$ $\frac{4}{6}$	5:13	=			
7. $10,750 + 2,925 =$	5:5	13,675	17. Find an equivalent fraction of $\frac{3}{5}$. 	5:14	$\frac{6}{10}$			
8. $8,912 - 6,495 =$	5:5	2,417	18. Write $3\frac{3}{7}$ as an improper fraction .	5:15	$\frac{24}{7}$			
9. Complete this sum without written working. $9,500 + 8,500 =$	5:6	18,000	19. $2\frac{1}{3} \times 3 =$	5:16	7			
10. A train has 327 seats. 238 seats are empty. How many are <u>on board</u> ?	5:7	89	20. Round 2.29 to the nearest whole number.	5:17	2			