

Crack the Code with Factors, Multiples, Square Numbers and Cube Numbers

Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes.

Each answer to the questions below will be a number. Match the number to a letter in the grid below. If your answers are correct, your letters will spell out a phrase.

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
14	15	16	17	18	19	20	21	22	23	24	25	26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

Which number?	Notes/Number	Letter
This number is a multiple of seven and two and is a factor of 28.	14	N
This number is a square number, a multiple of three and one more than a cube number.	9	I
This number is a prime number and a factor of 36.	3	C
When this number is squared, the answer is the largest square number in the list above.	5	E
This prime number is > 19 and < 29 .	23	W
This number is a multiple of five and three.	15	O
This multiple of nine is in between two prime numbers.	18	R
This number is the difference between 5^2 and 6^2 .	11	K

English – Adjectives

Underline the adjectives in the sentences below.

- 1. The excited Year 6 children waited eagerly on the playground for the coach to arrive to take them on their trip.
- 2. Waiting patiently, the chatty parents queued in a line to buy tickets to the school production.
- 3. The talented and focused athlete trained tirelessly in the weeks leading up to the competition.
- 4. The bright, sweet-scented flowers danced gracefully in the calm, summer breeze.
- 5. The keen and ambitious hikers who were climbing the tallest mountain in England finally reached the summit after six hours.
- 6. The loyal and dedicated football fans wept uncontrollably upon hearing the news their club had been relegated.

True or false? The adjective is underlined in the sentences below.

A. My brother bravely faced the adverse weather conditions to reach the summit of Snowdon. **F**

B. Last week, my favourite band performed at the summer festival in our local park. **T**

Verbal Reasoning – Letter Sequences

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	13	12	11	10	9	8	7	6	5	4	3	2	1

GR

+1

+2

HT

IV

JX

KZ

(L B)

PE

+2

+2

RG

TI

VK

XM

(Z O)

CV

-4

+4

YZ

UD

QH

ML

(I P)

BS	$\begin{matrix} +2 \\ -3 \end{matrix}$	DP	FM	HJ	JG	(<u>LD</u>)		
CA	$\begin{matrix} +2 \\ -4 \end{matrix}$	AE	YI	WM	UQ	(<u>SU</u>)		
LL	$\begin{matrix} +3 \\ +2 \end{matrix}$	ON	RP	UR	XT	(<u>Av</u>)		
US	$\begin{matrix} -2 \\ -3 \end{matrix}$	SP	QM	OJ	MG	(<u>KD</u>)		
ZV	$\begin{matrix} -3 \\ +3 \end{matrix}$	WS	$+1$	TT	QQ	NR	(<u>KO</u>)	
CC	$\begin{matrix} +1 \\ +2 \end{matrix}$	DE	$+2$	FG	$+1$	GI	IK	(<u>JM</u>)
FT	$\begin{matrix} +1 \\ -3 \end{matrix}$	GO	$\begin{matrix} +5 \\ -1 \end{matrix}$	LN	$+1$	MI	RH	(<u>SC</u>)
KJ	$\begin{matrix} +2 \\ -2 \end{matrix}$	MH	$\begin{matrix} +3 \\ -3 \end{matrix}$	PE	$+2$	RC	UZ	(<u>WX</u>)
VJ	$\begin{matrix} -2 \\ +3 \end{matrix}$	TM	$\begin{matrix} -1 \\ +2 \end{matrix}$	SO	QR	PT	(<u>NW</u>)	
AZ	$\begin{matrix} +1 \\ -4 \end{matrix}$	BV	$\begin{matrix} +2 \\ -4 \end{matrix}$	DR	$+3$	GN	KJ	(<u>PF</u>)
EG	$\begin{matrix} +2 \\ -3 \end{matrix}$	GD	$\begin{matrix} +3 \\ -1 \end{matrix}$	JB	LY	OW	(<u>QT</u>)	
YF	$\begin{matrix} -5 \\ 0 \end{matrix}$	TF	$\begin{matrix} -4 \\ +1 \end{matrix}$	PG	$\begin{matrix} -3 \\ +2 \end{matrix}$	MI	KL	(<u>IP</u>)

Non-Verbal Reasoning – Number

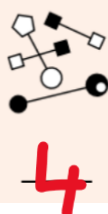
Warm Up

1. How many **circles** are there in each of these figures?

a.



b.



c.



d.



e.



f.



g.



2. In these figures, how many **more stars** are there than **squares**?

a.

1

b.

4

c.

2

d.

5

e.

2

f.

3

g.

7

3. What is the **total number** of shapes in each figure?

a.

6

b.

4

c.

4

d.

8

e.

6

f.

4

g.

2

What do all of these numbers have in common? even

a

b

c

d

e

()

a

b

c

d

e

()

a

b

c

d

e

()

a

b

c

d

e

()

2 w like 5 squares

English – Reading Inference – Look for the hidden facts

Jedda gazed intently at the map. Australia's south-west coast seemed to glow as her finger followed the path she still had to travel. Just three days left.

- 5 The night before her nineteenth birthday, Jedda had strapped her tatty tent onto her rickety bike and set off on the Munda Biddi Trail, a 1000-kilometre cycling route through the Australian forest. Now, just twenty-one days later, she was within touching distance of Albany, her final destination.

Blisters cushioned her rough palms and her legs twinged with every metre. But it would all be worth it. She was so close.

- 10 Basking in the dusty, orange haze as the sky's eye dipped towards the sea, Jedda reflected on how she would soon have completed her first ever solo adventure. She felt her chest swell with pride and allowed herself a small smile.

1. How old was Jedda when she started her cycle?

19

2. How many days will Jedda have cycled in total?

24

3. What time of day is it in the passage?

evening

Underline the word from the brackets that best completes the sentences below. Give one reason why you chose each of your answers.

4. Jedda studied the map _____. (carefully quickly sadly)

Reason: intently

5. Jedda's equipment is _____. (safe useless old)

Reason: tatty

6. Jedda's hands are _____. (small sore smooth)

Reason: blisters

"Raspberries! Tomatoes! Radishes! The juiciest around."

"You there, boy. Sample my fish. You won't find it fresher anywhere else. And for this price? You'd be a fool to miss it!"

5 "You look like someone who likes honey, mister. Mine is pure honey, fresh just this morning — the bees were working on it all —"

" — Ignore her, she's lying! Her honey is all sugar, she doesn't even own any bees. Try mine instead, young man."

The stalls swirled around Dima. A blur of rich smells, insistent voices, vibrant colours. The air fizzed with the stories of the energetic traders working there.

10 To Dima's right, an elderly woman stood smiling at him. Her face was carved with deep grooves, giving her a kindly, inviting look. Dima smiled back, and stepped further inside, plunging headfirst into their wondrous world.

1. Which of the following best describes the text's setting?
A A supermarket **B** A farm **C** A market
2. Which of the following best describes Dima's age?
A Middle-aged **B** Elderly **C** Youthful
3. Which of these adjectives best describes the people speaking in the passage?
A Persuasive **B** Patient **C** Formal **D** Shy
4. Which of these adjectives does not describe the location?
A Noisy **B** Exciting **C** Lively **D** Dangerous
5. The phrase "Her face was carved with deep grooves" (lines 10-11) shows:
A the elderly lady had freckles on her face.
B the elderly lady had wrinkles on her face.
C the elderly lady was wearing face paint.