30 DAYS OF
MENTAL MATHS

Think • Calculate • Challenge • Improve

A DAILY MATHS ROUTINE
30 printable days of short, focused mental-maths practice designed to build speed, accuracy, confidence and number sense.

Suggested Age: 10–14 • Grades 5–8

NUMBER SKILLS	TOPICS
Daily fluency • mental calculation • estimation • reasoning	Operations • fractions • decimals • percentages • ratio
Mixed review • patterns • problem solving	Time • measurement • geometry • algebra • data • probability

Name: _____ Start Date: _____

Teacher / Parent Tip: Aim for 10–15 minutes a day. Encourage students to solve mentally first and explain efficient strategies.

HOW TO USE THIS 30-DAY CHALLENGE

Complete one page each day. Try to work without a calculator, record answers clearly, and return to any question that needs a second look.

Day	Date	Score	Confidence ★ 1–5
1	_____	____ / 15	____
2	_____	____ / 15	____
3	_____	____ / 15	____
4	_____	____ / 15	____
5	_____	____ / 15	____
6	_____	____ / 15	____
7	_____	____ / 15	____
8	_____	____ / 15	____
9	_____	____ / 15	____
10	_____	____ / 15	____
11	_____	____ / 15	____
12	_____	____ / 15	____
13	_____	____ / 15	____
14	_____	____ / 15	____
15	_____	____ / 15	____
16	_____	____ / 15	____
17	_____	____ / 15	____
18	_____	____ / 15	____
19	_____	____ / 15	____
20	_____	____ / 15	____
21	_____	____ / 15	____
22	_____	____ / 15	____
23	_____	____ / 15	____
24	_____	____ / 15	____
25	_____	____ / 15	____
26	_____	____ / 15	____
27	_____	____ / 15	____
28	_____	____ / 15	____
29	_____	____ / 15	____
30	_____	____ / 15	____

Personal Goal: What would you like to improve over the next 30 days?

_____

_____

Day 1 • Number Fluency

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	48 + 27	_____
2	96 – 38	_____
3	7 × 8	_____
4	72 ÷ 9	_____
5	125 + 75	_____
6	500 – 275	_____
7	15 × 6	_____
8	144 ÷ 12	_____
9	9^2	_____
10	Half of 86	_____
11	Double 47	_____
12	25% of 80	_____
13	3/4 of 20	_____
14	0.5 + 0.25	_____
15	Which is greater: 0.6 or 0.56?	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 2 • Addition & Subtraction

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	235 + 148	_____
2	670 – 295	_____
3	999 + 101	_____
4	800 – 456	_____
5	325 + 275	_____
6	1000 – 625	_____
7	48 + 39 + 12	_____
8	150 – 67	_____
9	75 + 125 – 40	_____
10	450 – 175 + 25	_____
11	What is 100 more than 685?	_____
12	What is 50 less than 420?	_____
13	Find the missing number: 275 + ___ = 500	_____
14	Find the difference between 900 and 467	_____
15	Estimate 398 + 203 to the nearest hundred	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 3 • Multiplication Facts

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	6 × 7	_____
2	8 × 9	_____
3	12 × 6	_____
4	14 × 5	_____
5	25 × 4	_____
6	30 × 7	_____
7	16 × 3	_____
8	11 × 8	_____
9	9 × 12	_____
10	15 × 4	_____
11	18 × 5	_____
12	7 × 15	_____
13	24 × 5	_____
14	32 × 3	_____
15	What is 10 × 10 × 2?	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 4 • Division & Factors

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	56 ÷ 7	_____
2	81 ÷ 9	_____
3	120 ÷ 10	_____
4	144 ÷ 12	_____
5	225 ÷ 15	_____
6	96 ÷ 8	_____
7	180 ÷ 20	_____
8	360 ÷ 30	_____
9	Factor pairs of 24 (give two)	_____
10	Is 37 prime?	_____
11	Is 51 divisible by 3?	_____
12	HCF of 12 and 18	_____
13	LCM of 4 and 6	_____
14	Remainder when 47 is divided by 5	_____
15	Which is a factor of 36: 5, 6 or 7?	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 5 • Place Value & Rounding

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	Value of 7 in 57,432	_____
2	Value of 3 in 4,305	_____
3	Write 60,000 + 500 + 8	_____
4	Round 4,682 to nearest 10	_____
5	Round 4,682 to nearest 100	_____
6	Round 4,682 to nearest 1,000	_____
7	Which is greater: 70,050 or 70,500?	_____
8	10 times 430	_____
9	100 times 37	_____
10	One tenth of 640	_____
11	One hundredth of 900	_____
12	Smallest 5-digit number	_____
13	Largest 4-digit number	_____
14	How many hundreds are in 5,600?	_____
15	Write 8,045 in expanded form	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 6 • Fractions

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	1/2 + 1/4	_____
2	3/5 – 1/5	_____
3	2/3 of 12	_____
4	3/4 of 16	_____
5	Equivalent to 1/2: 2/4 or 2/3?	_____
6	Which is greater: 3/4 or 2/3?	_____
7	Simplify 6/8	_____
8	1/5 of 30	_____
9	5/6 – 2/6	_____
10	1/3 + 1/3	_____
11	2/5 + 1/5	_____
12	What fraction of 12 is 3?	_____
13	Convert 0.5 to a fraction	_____
14	Convert 3/4 to a decimal	_____
15	Which is closer to 1: 7/8 or 3/4?	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 7 • Decimals

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	0.7 + 0.2	_____
2	1.5 – 0.7	_____
3	0.4 × 10	_____
4	3.6 ÷ 10	_____
5	0.25 + 0.5	_____
6	2.4 + 1.35	_____
7	5 – 2.75	_____
8	0.8 × 5	_____
9	4.2 ÷ 2	_____
10	Which is greater: 0.62 or 0.602?	_____
11	Round 3.67 to nearest whole number	_____
12	Round 5.24 to nearest tenth	_____
13	0.5 as a fraction	_____
14	75% as a decimal	_____
15	0.09 as a percentage	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 8 • Percentages

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	10% of 80	_____
2	25% of 60	_____
3	50% of 46	_____
4	20% of 90	_____
5	5% of 200	_____
6	75% of 40	_____
7	1% of 500	_____
8	50% as a fraction	_____
9	25% as a fraction	_____
10	0.4 as a percentage	_____
11	3/5 as a percentage	_____
12	A $50 item is reduced by 10%. Sale price?	_____
13	15% of 100	_____
14	30% of 70	_____
15	What percentage is 12 out of 20?	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 9 • Mental Maths with Money

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	$5.50 + $2.25	_____
2	$10 – $3.65	_____
3	3 × $4	_____
4	$20 ÷ 4	_____
5	25% of $40	_____
6	10% of $70	_____
7	$12.50 + $7.50	_____
8	$50 – $18.75	_____
9	4 items at $2.50 each	_____
10	$30 shared equally by 5 people	_____
11	A $40 item has $8 off. New price?	_____
12	Change from $20 after spending $13.75	_____
13	2 × $3.75	_____
14	$6 + $4.50 + $2.50	_____
15	Which is cheaper: $7.90 or $7.09?	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 10 • Time

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	60 minutes = ? hours	_____
2	2 hours = ? minutes	_____
3	90 minutes = ? hours and minutes	_____
4	Quarter of an hour	_____
5	Half an hour	_____
6	3:20 + 40 min	_____
7	8:15 + 45 min	_____
8	2:30 – 50 min	_____
9	How many minutes from 9:10 to 9:55?	_____
10	How many minutes in 3.5 hours?	_____
11	20 minutes after 6:45	_____
12	15 minutes before 10:00	_____
13	What time is 2 hours after 11:30?	_____
14	How many seconds in 2 minutes?	_____
15	Convert 150 minutes to hours and minutes	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 11 • Measurement

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	3 m = ? cm	_____
2	2.5 kg = ? g	_____
3	4 L = ? mL	_____
4	750 cm = ? m	_____
5	1.2 kg = ? g	_____
6	3,500 mL = ? L	_____
7	A 2 m ribbon cut into 50 cm pieces: how many?	_____
8	Which is heavier: 900 g or 1 kg?	_____
9	Which is longer: 1.2 m or 115 cm?	_____
10	250 mL + 750 mL	_____
11	5 km = ? m	_____
12	80 cm = ? mm	_____
13	2.4 L = ? mL	_____
14	A 5 kg bag: 750 g removed. Left?	_____
15	2 m 35 cm = ? cm	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 12 • Perimeter & Area

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	Perimeter of square side 6 cm	_____
2	Perimeter of rectangle 8 cm × 3 cm	_____
3	Area of rectangle 7 cm × 4 cm	_____
4	Area of square side 9 cm	_____
5	Perimeter of triangle sides 5, 6, 7 cm	_____
6	Area of rectangle 10 × 5 m	_____
7	Missing side of square with perimeter 32 cm	_____
8	Rectangle perimeter 30 cm, length 10 cm. Width?	_____
9	Area of triangle base 8 cm, height 5 cm	_____
10	A 4 × 6 rectangle has area?	_____
11	Double the area of 5 × 7 cm	_____
12	Perimeter of regular pentagon side 4 cm	_____
13	Area of 12 × 3 cm	_____
14	Which is larger: 6×6 or 5×7?	_____
15	Perimeter of 10×2 rectangle	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 13 • Ratio

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	Simplify 6:9	_____
2	Equivalent to 2:5 with first term 6	_____
3	Ratio 3:4 total 21. First part?	_____
4	Ratio 2:3 total 25. Second part?	_____
5	Red:blue = 1:2. If 5 red, blue?	_____
6	4:7 equivalent ratio with first term 12	_____
7	Simplify 15:20	_____
8	Ratio boys:girls=2:3, 20 boys. Girls?	_____
9	Unit rate: 60 km in 3 h	_____
10	12 apples cost $6. Cost each?	_____
11	Scale 1 cm:5 km. 4 cm?	_____
12	3/4 = ?:20	_____
13	Ratio 5:8, first part 15. Second?	_____
14	Which is equivalent to 3:7: 6:14 or 6:12?	_____
15	Simplify 18:30	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 14 • Integers

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	–3 + 8	_____
2	7 – 12	_____
3	–6 – 4	_____
4	–8 + 3	_____
5	–5 × 3	_____
6	–24 ÷ 6	_____
7	9 + (–4)	_____
8	–10 + 15	_____
9	6 – (–2)	_____
10	–7 × –2	_____
11	Temperature rises from –2°C by 7°C	_____
12	Which is greater: –3 or –8?	_____
13	Distance from –4 to 5	_____
14	Opposite of –12	_____
15	–20 ÷ –5	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 15 • Powers & Roots

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	2^2	_____
2	3^2	_____
3	5^2	_____
4	10^2	_____
5	2^3	_____
6	3^3	_____
7	√49	_____
8	√81	_____
9	√100	_____
10	10^3	_____
11	$4^2 + 3^2$	_____
12	$5^2 – 4^2$	_____
13	2^4	_____
14	√64 + 2	_____
15	Which is greater: 3^2 or 2^4?	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 16 • Algebra Basics

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	If x=5, x+7	_____
2	If a=4, 3a	_____
3	If n=9, n–3	_____
4	If y=6, 2y+1	_____
5	Solve x+8=15	_____
6	Solve x–6=10	_____
7	Solve 3x=21	_____
8	Solve x/4=6	_____
9	Simplify 4x+2x	_____
10	Simplify 7a–3a	_____
11	Next term: 3,6,9,12,___	_____
12	Rule for 5,10,15,20	_____
13	If p=3, 5p–2	_____
14	Solve 2x+4=12	_____
15	Solve x+15=23	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 17 • Geometry

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	Angles in a triangle total?	_____
2	Angles on a straight line total?	_____
3	Angles around a point total?	_____
4	A right angle	_____
5	A full turn	_____
6	Third angle: 50°, 60°, ?	_____
7	Complement of 35°	_____
8	Supplement of 120°	_____
9	How many sides in a hexagon?	_____
10	How many sides in an octagon?	_____
11	How many right angles in a rectangle?	_____
12	How many lines of symmetry does a square have?	_____
13	Name a quadrilateral with four equal sides and four right angles	_____
14	How many edges does a cube have?	_____
15	How many vertices does a cube have?	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 18 • Data & Averages

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	Mean of 4,6,8	_____
2	Mean of 5,5,10	_____
3	Median of 3,7,2,9,5	_____
4	Mode of 2,4,4,5,6	_____
5	Range of 8,3,10,5	_____
6	Mean of 10,20,30,40	_____
7	Median of 2,4,6,8	_____
8	Mode of 1,2,2,3,3,3	_____
9	Range of 15,15,9,4	_____
10	If mean of 4 numbers is 12, total?	_____
11	Total of 5 scores averaging 8	_____
12	Which is most common: 2,3,3,4,5?	_____
13	Range of 100,90,95,80	_____
14	Mean of 6,8,10,12	_____
15	Median of 1,4,6,7,9,10,12	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 19 • Probability

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	Probability of heads on a fair coin	_____
2	Probability of rolling a 6 on a fair die	_____
3	Probability of rolling an even number	_____
4	Probability of rolling >4	_____
5	Probability of rolling <7	_____
6	Probability of impossible event	_____
7	Probability of certain event	_____
8	Bag: 3 red, 2 blue. P(red)	_____
9	Bag: 4 green, 1 yellow. P(yellow)	_____
10	Die: P(odd)	_____
11	Spinner has 4 equal sections; P(one section)	_____
12	P(not getting 6 on die)	_____
13	2 red, 2 blue. P(blue)	_____
14	10 cards, 3 stars. P(star)	_____
15	Can probability be 1.2?	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 20 • Mixed Challenge

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	125 + 375	_____
2	900 – 456	_____
3	14 × 6	_____
4	144 ÷ 9	_____
5	3/4 of 28	_____
6	0.6 + 0.35	_____
7	25% of 120	_____
8	2.5 m in cm	_____
9	Perimeter of 5×4 rectangle	_____
10	√121	_____
11	Solve x+9=20	_____
12	Simplify 12:18	_____
13	Mean of 6,9,12	_____
14	P(even on die)	_____
15	–4 + 10	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 21 • Speed Calculations

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	99 + 1	_____
2	250 – 75	_____
3	19 × 5	_____
4	200 ÷ 25	_____
5	15% of 200	_____
6	1/4 of 100	_____
7	0.75 + 0.25	_____
8	3.5 – 1.5	_____
9	7^2	_____
10	√144	_____
11	2.5 × 4	_____
12	600 ÷ 50	_____
13	3/5 of 50	_____
14	90 + 110 – 50	_____
15	Double 125	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 22 • Fractions & Decimals

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	1/4 as decimal	_____
2	0.2 as fraction	_____
3	0.75 as fraction	_____
4	2/5 as decimal	_____
5	60% as fraction	_____
6	1/2 + 0.25	_____
7	0.8 – 1/5	_____
8	3/4 + 0.1	_____
9	2.5 – 3/4	_____
10	1.2 + 3/5	_____
11	Which is greater: 0.7 or 2/3?	_____
12	1/10 + 0.4	_____
13	25% + 0.5	_____
14	3/5 of 20	_____
15	0.375 as a fraction	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 23 • Multi-Step Thinking

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	Start with 20, double it, add 5	_____
2	100 – 25, then ÷5	_____
3	6 × 8, then –10	_____
4	50% of 60, then +7	_____
5	3/4 of 40, then –5	_____
6	12 + 18, then ×2	_____
7	80 ÷4, then +13	_____
8	5^2 + 10	_____
9	100 – 30%, then subtract 10	_____
10	2/3 of 30 + 4	_____
11	A number ×3 = 27, then +2	_____
12	50 + 25% of 40	_____
13	120 – 1/4 of 80	_____
14	10 × 6 ÷3	_____
15	3/5 of 50 – 5	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 24 • Number Patterns

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	2,4,6,8,___	_____
2	5,10,15,20,___	_____
3	3,6,12,24,___	_____
4	100,90,80,70,___	_____
5	1,4,7,10,___	_____
6	2,6,18,54,___	_____
7	50,45,40,35,___	_____
8	7,14,21,28,___	_____
9	81,72,63,54,___	_____
10	4,8,16,32,___	_____
11	1,2,4,8,___	_____
12	20,17,14,11,___	_____
13	10,20,40,80,___	_____
14	6,12,18,24,___	_____
15	Rule: 9,12,15,18	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 25 • Estimation & Reasoning

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	Estimate 49×21	_____
2	Estimate 398+205	_____
3	Estimate 799–302	_____
4	Which is closer to 100: 96 or 107?	_____
5	Is 4,999 closer to 5,000 or 4,000?	_____
6	Estimate 19.8+10.2	_____
7	Estimate 51% of 200	_____
8	Which is larger: 2/3 or 0.6?	_____
9	Is 7/8 greater than 3/4?	_____
10	Which is reasonable for a pencil: 15 cm or 15 m?	_____
11	Which is reasonable for a classroom: 30 m^2 or 30 km^2?	_____
12	A bus holds 50 or 500 people?	_____
13	Is 3.2 kg more or less than 3 kg?	_____
14	Which is closer to 1: 0.98 or 0.82?	_____
15	Estimate 24×49	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 26 • Money, Time & Measures

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	$15 – $6.75	_____
2	2 h 15 min + 45 min	_____
3	1.5 kg + 500 g	_____
4	3 L – 750 mL	_____
5	20% of $80	_____
6	A $60 item after 25% off	_____
7	90 min after 4:20	_____
8	2.4 m + 60 cm	_____
9	5 kg – 1.25 kg	_____
10	$2.50 × 6	_____
11	4,000 mL = ? L	_____
12	2.75 hours = ? h min	_____
13	750 g + 250 g	_____
14	5 m ribbon – 80 cm	_____
15	$100 – $37.50	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 27 • Algebra & Number Sense

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	If $x=7$, $2x$	_____
2	If $y=10$, $y-4$	_____
3	If $a=3$, a^2	_____
4	Solve $x+12=20$	_____
5	Solve $x-9=4$	_____
6	Solve $4x=28$	_____
7	Solve $x/5=9$	_____
8	$3n+2$ when $n=4$	_____
9	$5a-1$ when $a=6$	_____
10	Simplify $2x+5x$	_____
11	Next: 4,8,12,16	_____
12	Next: 30,25,20,15	_____
13	Which is greater: 2^3 or 3^2?	_____
14	Factor of 48: 7 or 8?	_____
15	Multiple of 9: 45 or 46?	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 28 • Geometry & Spatial Thinking

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	Sum of triangle angles	_____
2	One angle of equilateral triangle	_____
3	Angle in a square	_____
4	Sides of a decagon	_____
5	Faces of a cube	_____
6	Edges of a cuboid	_____
7	Vertices of a cuboid	_____
8	Perimeter of square side 11 cm	_____
9	Area of 8×9 cm rectangle	_____
10	Third angle: 80°, 40°, ?	_____
11	Complement of 22°	_____
12	Supplement of 75°	_____
13	Lines of symmetry in an equilateral triangle	_____
14	How many diagonals does a quadrilateral have?	_____
15	Volume of cube side 3 cm	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 29 • Mixed Mastery

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	45% of 200	_____
2	3/8 of 64	_____
3	2.75 + 1.25	_____
4	500 – 275	_____
5	18 × 7	_____
6	144 ÷ 16	_____
7	Simplify 20:30	_____
8	√169	_____
9	Solve 2x=18	_____
10	Mean of 4,8,12	_____
11	P(even on die)	_____
12	3 m 40 cm = ? cm	_____
13	Area of 9×6 cm	_____
14	–7 + 15	_____
15	0.125 as a fraction	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

Day 30 • Mental Maths Grand Finale

Try to solve these mentally first. Show a quick strategy when a question asks you to explain.

#	Question	Answer
1	375 + 625	_____
2	1,000 – 375	_____
3	25 × 16	_____
4	360 ÷ 12	_____
5	3/4 of 48	_____
6	0.75 × 20	_____
7	40% of 250	_____
8	2.5 kg + 750 g	_____
9	Perimeter of 12×5 rectangle	_____
10	√196	_____
11	Solve x+17=30	_____
12	Simplify 24:36	_____
13	Mean of 10,15,20	_____
14	P(rolling a number <3 on a die)	_____
15	–12 + 20 – 3	_____

■ **Challenge:** Which question was easiest for you? Which required the most thinking? Explain briefly.

_____

ANSWER KEY • DAYS 1–15

Day 1 • Number Fluency

1. 75 • 2. 58 • 3. 56 • 4. 8 • 5. 200 • 6. 225 • 7. 90 • 8. 12 • 9. 81 • 10. 43 • 11. 94 • 12. 20 • 13. 15 • 14. 0.75 • 15. 0.6

Day 2 • Addition & Subtraction

1. 383 • 2. 375 • 3. 1100 • 4. 344 • 5. 600 • 6. 375 • 7. 99 • 8. 83 • 9. 160 • 10. 300 • 11. 785 • 12. 370 • 13. 225 • 14. 433 • 15. 600

Day 3 • Multiplication Facts

1. 42 • 2. 72 • 3. 72 • 4. 70 • 5. 100 • 6. 210 • 7. 48 • 8. 88 • 9. 108 • 10. 60 • 11. 90 • 12. 105 • 13. 120 • 14. 96 • 15. 200

Day 4 • Division & Factors

1. 8 • 2. 9 • 3. 12 • 4. 12 • 5. 15 • 6. 12 • 7. 9 • 8. 12 • 9. 1×24, 2×12, 3×8, or 4×6 • 10. Yes • 11. Yes • 12. 6 • 13. 12 • 14. 2 • 15. 6

Day 5 • Place Value & Rounding

1. 7,000 • 2. 300 • 3. 60,508 • 4. 4,680 • 5. 4,700 • 6. 5,000 • 7. 70,500 • 8. 4,300 • 9. 3,700 • 10. 64 • 11. 9 • 12. 10,000 • 13. 9,999 • 14. 56 • 15. 8,000 + 40 + 5

Day 6 • Fractions

1. 3/4 • 2. 2/5 • 3. 8 • 4. 12 • 5. 2/4 • 6. 3/4 • 7. 3/4 • 8. 6 • 9. 1/2 • 10. 2/3 • 11. 3/5 • 12. 1/4 • 13. 1/2 • 14. 0.75 • 15. 7/8

Day 7 • Decimals

1. 0.9 • 2. 0.8 • 3. 4 • 4. 0.36 • 5. 0.75 • 6. 3.75 • 7. 2.25 • 8. 4 • 9. 2.1 • 10. 0.62 • 11. 4 • 12. 5.2 • 13. 1/2 • 14. 0.75 • 15. 9%

Day 8 • Percentages

1. 8 • 2. 15 • 3. 23 • 4. 18 • 5. 10 • 6. 30 • 7. 5 • 8. 1/2 • 9. 1/4 • 10. 40% • 11. 60% • 12. $45 • 13. 15 • 14. 21 • 15. 60%

Day 9 • Mental Maths with Money

1. $7.75 • 2. $6.35 • 3. $12 • 4. $5 • 5. $10 • 6. $7 • 7. $20 • 8. $31.25 • 9. $10 • 10. $6 each • 11. $32 • 12. $6.25 • 13. $7.50 • 14. $13 • 15. $7.09

Day 10 • Time

1. 1 hour • 2. 120 • 3. 1 h 30 min • 4. 15 minutes • 5. 30 minutes • 6. 4:00 • 7. 9:00 • 8. 1:40 • 9. 45 • 10. 210 • 11. 7:05 • 12. 9:45 • 13. 1:30 • 14. 120 • 15. 2 h 30 min

Day 11 • Measurement

1. 300 cm • 2. 2,500 g • 3. 4,000 mL • 4. 7.5 m • 5. 1,200 g • 6. 3.5 L • 7. 4 • 8. 1 kg • 9. 1.2 m • 10. 1 L • 11. 5,000 m • 12. 800 mm • 13. 2,400 mL • 14. 4.25 kg • 15. 235 cm

Day 12 • Perimeter & Area

1. 24 cm • 2. 22 cm • 3. 28 cm² • 4. 81 cm² • 5. 18 cm • 6. 50 m² • 7. 8 cm • 8. 5 cm • 9. 20 cm² • 10. 24 cm² • 11. 70 cm² • 12. 20 cm • 13. 36 cm² • 14. 6×6 (36 vs 35) • 15. 24 cm

Day 13 • Ratio

1. 2:3 • 2. 6:15 • 3. 9 • 4. 15 • 5. 10 • 6. 12:21 • 7. 3:4 • 8. 30 • 9. 20 km/h • 10. $0.50 • 11. 20 km • 12. 15 • 13. 24 • 14. 6:14 • 15. 3:5

Day 14 • Integers

1. 5 • 2. –5 • 3. –10 • 4. –5 • 5. –15 • 6. –4 • 7. 5 • 8. 5 • 9. 8 • 10. 14 • 11. 5°C • 12. –3 • 13. 9 • 14. 12 • 15. 4

Day 15 • Powers & Roots

1. 4 • 2. 9 • 3. 25 • 4. 100 • 5. 8 • 6. 27 • 7. 7 • 8. 9 • 9. 10 • 10. 1,000 • 11. 25 • 12. 9 • 13. 16 • 14. 10 • 15. 2^4(16)

ANSWER KEY • DAYS 16–30

Day 16 • Algebra Basics

1. 12 • 2. 12 • 3. 6 • 4. 13 • 5. 7 • 6. 16 • 7. 7 • 8. 24 • 9. 6x • 10. 4a • 11. 15 • 12. ×5 / add 5 • 13. 13 • 14. 4 • 15. 8

Day 17 • Geometry

1. 180° • 2. 180° • 3. 360° • 4. 90° • 5. 360° • 6. 70° • 7. 55° • 8. 60° • 9. 6 • 10. 8 • 11. 4 • 12. 4 • 13. Square • 14. 12 • 15. 8

Day 18 • Data & Averages

1. 6 • 2. 20/3 • 3. 5 • 4. 4 • 5. 7 • 6. 25 • 7. 5 • 8. 3 • 9. 11 • 10. 48 • 11. 40 • 12. 3 • 13. 20 • 14. 9 • 15. 7

Day 19 • Probability

1. 1/2 • 2. 1/6 • 3. 1/2 • 4. 1/3 • 5. 1 • 6. 0 • 7. 1 • 8. 3/5 • 9. 1/5 • 10. 1/2 • 11. 1/4 • 12. 5/6 • 13. 1/2 • 14. 3/10 • 15. No

Day 20 • Mixed Challenge

1. 500 • 2. 444 • 3. 84 • 4. 16 • 5. 21 • 6. 0.95 • 7. 30 • 8. 250 cm • 9. 18 cm • 10. 11 • 11. 11 • 12. 2:3 • 13. 9 • 14. 1/2 • 15. 6

Day 21 • Speed Calculations

1. 100 • 2. 175 • 3. 95 • 4. 8 • 5. 30 • 6. 25 • 7. 1 • 8. 2 • 9. 49 • 10. 12 • 11. 10 • 12. 12 • 13. 30 • 14. 150 • 15. 250

Day 22 • Fractions & Decimals

1. 0.25 • 2. 1/5 • 3. 3/4 • 4. 0.4 • 5. 3/5 • 6. 0.75 • 7. 0.6 • 8. 0.85 • 9. 1.75 • 10. 1.8 • 11. 0.7 • 12. 0.5 • 13. 0.75 • 14. 12 • 15. 3/8

Day 23 • Multi-Step Thinking

1. 45 • 2. 15 • 3. 38 • 4. 37 • 5. 25 • 6. 60 • 7. 33 • 8. 35 • 9. 60 • 10. 24 • 11. 11 • 12. 60 • 13. 100 • 14. 20 • 15. 25

Day 24 • Number Patterns

1. 10 • 2. 25 • 3. 48 • 4. 60 • 5. 13 • 6. 162 • 7. 30 • 8. 35 • 9. 45 • 10. 64 • 11. 16 • 12. 8 • 13. 160 • 14. 30 • 15. add 3

Day 25 • Estimation & Reasoning

1. about 1,000 • 2. about 600 • 3. about 500 • 4. 96 • 5. 5,000 • 6. about 30 • 7. about 100 • 8. 2/3 • 9. Yes • 10. 15 cm • 11. 30 m² • 12. 50 • 13. More • 14. 0.98 • 15. about 1,200

Day 26 • Money, Time & Measures

1. $8.25 • 2. 3 h • 3. 2 kg • 4. 2.25 L • 5. $16 • 6. $45 • 7. 5:50 • 8. 3 m • 9. 3.75 kg • 10. $15 • 11. 4 L • 12. 2 h 45 min • 13. 1 kg • 14. 4.2 m • 15. $62.50

Day 27 • Algebra & Number Sense

1. 14 • 2. 6 • 3. 9 • 4. 8 • 5. 13 • 6. 7 • 7. 45 • 8. 14 • 9. 29 • 10. 7x • 11. 20 • 12. 10 • 13. 3² • 14. 8 • 15. 45

Day 28 • Geometry & Spatial Thinking

1. 180° • 2. 60° • 3. 90° • 4. 10 • 5. 6 • 6. 12 • 7. 8 • 8. 44 cm • 9. 72 cm² • 10. 60° • 11. 68° • 12. 105° • 13. 3 • 14. 2 • 15. 27 cm³

Day 29 • Mixed Mastery

1. 90 • 2. 24 • 3. 4 • 4. 225 • 5. 126 • 6. 9 • 7. 2:3 • 8. 13 • 9. 9 • 10. 8 • 11. 1/2 • 12. 340 cm • 13. 54 cm² • 14. 8 • 15. 1/8

Day 30 • Mental Maths Grand Finale

1. 1,000 • 2. 625 • 3. 400 • 4. 30 • 5. 36 • 6. 15 • 7. 100 • 8. 3.25 kg • 9. 34 cm • 10. 14 • 11. 13 • 12. 2:3 • 13. 15 • 14. 1/3 • 15. 5