

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	$72 \div 9$	_____
5	$125 + 75$	_____
6	$500 - 275$	_____
7	15×6	_____
8	$144 \div 12$	_____
9	9^2	_____
10	Half of 86	_____
11	Double 47	_____
12	25% of 80	_____
13	$\frac{3}{4}$ 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: $275 + \underline{\quad} = 500$	_____
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 $10 \times 10 \times 2$?	_____

■ **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	$56 \div 7$	_____
2	$81 \div 9$	_____
3	$120 \div 10$	_____
4	$144 \div 12$	_____
5	$225 \div 15$	_____
6	$96 \div 8$	_____
7	$180 \div 20$	_____
8	$360 \div 30$	_____
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	$\frac{1}{2} + \frac{1}{4}$	_____
2	$\frac{3}{5} - \frac{1}{5}$	_____
3	$\frac{2}{3}$ of 12	_____
4	$\frac{3}{4}$ of 16	_____
5	Equivalent to $\frac{1}{2}$: $\frac{2}{4}$ or $\frac{2}{3}$?	_____
6	Which is greater: $\frac{3}{4}$ or $\frac{2}{3}$?	_____
7	Simplify $\frac{6}{8}$	_____
8	$\frac{1}{5}$ of 30	_____
9	$\frac{5}{6} - \frac{2}{6}$	_____
10	$\frac{1}{3} + \frac{1}{3}$	_____
11	$\frac{2}{5} + \frac{1}{5}$	_____
12	What fraction of 12 is 3?	_____
13	Convert 0.5 to a fraction	_____
14	Convert $\frac{3}{4}$ to a decimal	_____
15	Which is closer to 1: $\frac{7}{8}$ or $\frac{3}{4}$?	_____

■ **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	$3.6 \div 10$	_____
5	$0.25 + 0.5$	_____
6	$2.4 + 1.35$	_____
7	$5 - 2.75$	_____
8	0.8×5	_____
9	$4.2 \div 2$	_____
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	$\frac{3}{5}$ 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	$3 \times \$4$	_____
4	$\$20 \div 4$	_____
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	$2 \times \$3.75$	_____
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	$\frac{3}{4} = ? : 20$	_____
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	$-24 \div 6$	_____
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	$-20 \div -5$	_____

■ **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	$\sqrt{49}$	_____
8	$\sqrt{81}$	_____
9	$\sqrt{100}$	_____
10	10^3	_____
11	$4^2 + 3^2$	_____
12	$5^2 - 4^2$	_____
13	$2^{\blacksquare}$	_____
14	$\sqrt{64} + 2$	_____
15	Which is greater: 3^2 or $2^{\blacksquare}$?	_____

■ **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. $P(\text{red})$	_____
9	Bag: 4 green, 1 yellow. $P(\text{yellow})$	_____
10	Die: $P(\text{odd})$	_____
11	Spinner has 4 equal sections; $P(\text{one section})$	_____
12	$P(\text{not getting 6 on die})$	_____
13	2 red, 2 blue. $P(\text{blue})$	_____
14	10 cards, 3 stars. $P(\text{star})$	_____
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	$144 \div 9$	_____
5	$\frac{3}{4}$ of 28	_____
6	$0.6 + 0.35$	_____
7	25% of 120	_____
8	2.5 m in cm	_____
9	Perimeter of 5×4 rectangle	_____
10	$\sqrt{121}$	_____
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	$200 \div 25$	_____
5	15% of 200	_____
6	$\frac{1}{4}$ of 100	_____
7	$0.75 + 0.25$	_____
8	$3.5 - 1.5$	_____
9	7^2	_____
10	$\sqrt{144}$	_____
11	2.5×4	_____
12	$600 \div 50$	_____
13	$\frac{3}{5}$ 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	$\frac{1}{4}$ as decimal	_____
2	0.2 as fraction	_____
3	0.75 as fraction	_____
4	$\frac{2}{5}$ as decimal	_____
5	60% as fraction	_____
6	$\frac{1}{2} + 0.25$	_____
7	$0.8 - \frac{1}{5}$	_____
8	$\frac{3}{4} + 0.1$	_____
9	$2.5 - \frac{3}{4}$	_____
10	$1.2 + \frac{3}{5}$	_____
11	Which is greater: 0.7 or $\frac{2}{3}$?	_____
12	$\frac{1}{10} + 0.4$	_____
13	$25\% + 0.5$	_____
14	$\frac{3}{5}$ 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 $\div 5$	_____
3	6×8 , then -10	_____
4	50% of 60, then $+7$	_____
5	$\frac{3}{4}$ of 40, then -5	_____
6	$12 + 18$, then $\times 2$	_____
7	$80 \div 4$, then $+13$	_____
8	$5^2 + 10$	_____
9	$100 - 30\%$, then subtract 10	_____
10	$\frac{2}{3}$ of $30 + 4$	_____
11	A number $\times 3 = 27$, then $+2$	_____
12	$50 + 25\%$ of 40	_____
13	$120 - \frac{1}{4}$ of 80	_____
14	$10 \times 6 \div 3$	_____
15	$\frac{3}{5}$ 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: $\frac{2}{3}$ or 0.6?	_____
9	Is $\frac{7}{8}$ greater than $\frac{3}{4}$?	_____
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	$\frac{3}{8}$ of 64	_____
3	$2.75 + 1.25$	_____
4	$500 - 275$	_____
5	18×7	_____
6	$144 \div 16$	_____
7	Simplify 20:30	_____
8	$\sqrt{169}$	_____
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	$360 \div 12$	_____
5	$\frac{3}{4}$ of 48	_____
6	0.75×20	_____
7	40% of 250	_____
8	2.5 kg + 750 g	_____
9	Perimeter of 12×5 rectangle	_____
10	$\sqrt{196}$	_____
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. $\frac{3}{4}$ • 2. $\frac{2}{5}$ • 3. 8 • 4. 12 • 5. $\frac{2}{4}$ • 6. $\frac{3}{4}$ • 7. $\frac{3}{4}$ • 8. 6 • 9. $\frac{1}{2}$ • 10. $\frac{2}{3}$ • 11. $\frac{3}{5}$ • 12. $\frac{1}{4}$ • 13. $\frac{1}{2}$ • 14. 0.75 • 15. $\frac{7}{8}$

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. $\frac{1}{2}$ • 14. 0.75 • 15. 9%

Day 8 • Percentages

1. 8 • 2. 15 • 3. 23 • 4. 18 • 5. 10 • 6. 30 • 7. 5 • 8. $\frac{1}{2}$ • 9. $\frac{1}{4}$ • 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 cm^2 • 4. 81 cm^2 • 5. 18 cm • 6. 50 m^2 • 7. 8 cm • 8. 5 cm • 9. 20 cm^2 • 10. 24 cm^2 • 11. 70 cm^2 • 12. 20 cm • 13. 36 cm^2 • 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■ (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. $\times 5$ / 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 m^2 • 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. 3^2 • 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 cm^2 • 10. 60° • 11. 68° • 12. 105° • 13. 3 • 14. 2 • 15. 27 cm^3

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 cm^2 • 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