

Categories and Scattergories Target Number 12 Exemplar

Write something that could be the number 12

	Operations (A)	Multiples (A)	Factors (A)
	Write an expression equal to 12	Write a multiple of 12	Number with a factor of 12
1.	$8 + 4$	$12 \times 2 = 24$	$36 = 12 \times 3$
2.	$2(9 - 3)$	$12 \times 5 = 60$	$72 = 12 \times 6$
3.	$5 \times 3 - 3$	$12 \times 11 = 132$	$96 = 12 \times 8$
4.	$48 \div 4$	$12 \times 20 = 240$	$144 = 12 \times 12$
5.	$2^3 + 4$	$12 \times 30 = 360$	$192 = 12 \times 16$
	Fractions (A)	Percentages (A)	Properties (A)
	Write a fraction equal to 12	Write a % statement involving 12	Describe 12
1.	$\frac{12}{1} = 12$	$\frac{12}{100} = 12\%$	natural number
2.	$\frac{24}{2} = 12$	$\frac{3}{25} = \frac{12}{100} = 12\%$	even
3.	$\frac{84}{7} = 12$	$\frac{24}{200} = \frac{12}{100} = 12\%$	highly composite
4.	$\frac{108}{9} = 12$	$\frac{30}{250} = \frac{3}{25} = \frac{12}{100} = 12\%$	Divisible by 1, 2, 3, 4, 6, 12
5.	$\frac{300}{25} = 12$	$\frac{2}{5} \times \frac{3}{10} = \frac{6}{50} = \frac{12}{100} = 12\%$	One dozen

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	Algebra (B)	Algebraic Equations (B)	Patterns (B)
	Write an expression equal to 12	The solution is 12	Sequences with 12
1.	$2a$ when $a = 6$	$2x - 3 = 21$	2, 6, 12, 20 . . . rectangular numbers
2.	$3b - 16 + \frac{b}{2}$ when $b = 8$	$\frac{72}{x} = 6$	2, 4, 6, 8, 10, 12 even numbers
3.	$m^2 + 3$ when $m = 3$	$x^2 = 144, x > 0$	2, 7, 12, 17, 22 . . . common difference 5
4.	$3n$ when $n = 4$	$4x + 12 = 60$	6, 12, 24, 48, 96 . . . exponential pattern
	Graphs (B)	Space & Shape (C)	Measurement (D)
	Write something with 12...	Write something with 12...	Write something with 12...
1.	(12 ; 0)	12 edges of a cube or prism	12 cm
2.	(0 ; 12)	12 interior angles	12 kg
3.	(6 ; 12)	a dodecagon has 12 sides	12 litres
4.	$x = 12$	a clock has 12-hour markings	12 min or seconds or hours
5.	$y = 12$	a dodecahedron has 12 faces	12°C
	Perimeter (D)	Area (D)	Volume (D)
	Dimension rectangle if $P = 12 u$	Dimensions rectangle if $A = 12 u^2$	Dimension prism if $V = 12 u^3$
1.	1×5	1×12	$1 \times 1 \times 12$
2.	2×4	2×6	$1 \times 2 \times 6$
3.	3×3	3×4	$1 \times 3 \times 4$
	Data Handling		Probability
	Mode, Median, Mean, Range 12	Mean = Median = 12, no value 12	Create a problem with 12
1.	6, 12, 12, 18	5, 11, 13, 19	Probability of drawing a 12 from a deck of cards
	Real-life contexts	Word Problems	
	Practical uses of 12	Create a story with answer 12	
1.	a dozen eggs	Sam has 15 sweets and gives away 3	
2.	months in a year	There are 3 bags with 4 apples each	
3.	hours on a clock face	A rope 48 m long is cut into 4 equal pieces	