





Maths targets – overview

Astronaut selection

Count to 10			
Identify numerals 1 to 5			
Count up to three or four objects by saying one number name for each of them			
Count out up to six objects from a larger group			
Select the correct number to represent 1 to 5  = 3			
Select the correct number to represent 1 to 10  = 8			
Count objects to 10			

Launch Pad

Count to 20			
Read the numbers 1 to 20 in numerals			
Say 1 more and 1 less than any number between 0-20			
Know by heart all addition and subtraction facts for each number up to 5, so $5 + 0$, $5 - 0$, $4 + 1$, $4 - 1$, $3 + 1$, $3 - 1$, $2 + 1$, $2 - 1$...			
Count in twos 2, 4, 6, 8, 10, 12, 14, 16, 18, 20			
Count in fives 5, 10, 15, 20, 25, 30, 35, 40, 45, 50			
Count in tens 10, 20, 30, 40, 50, 60, 70, 80, 90, 100			
Know by heart all number bonds to 10, so $7 + 3$, $2 + 8$, $4 + 6$...			
Recognise odd and even numbers			

Mercury

Know by heart all bonds of multiples of 10 to 100, so $30 + 70$, $20 + 80$, $60 + 40$...			
Recognise multiples of 5 and 10			
Know the days of the week, months of the year and seasons			
Say 1 more and 1 less than any two-digit number			
Recall the doubles of all numbers to at least 10, so double 7 = 14, double 3 = 6, double 9 = 18			
Know by heart all number bonds that total 20, so $8 + 12$, $3 + 17$, $10 + 10$, $16 + 4$...			
Know by heart all addition and subtraction facts for each number up to 10, so $4 + 5$, $3 + 6$, $9 - 2$, $8 - 3$...			
Tell the time to o'clock and half past on an analogue clock			

Venus

Count in tens from any number, forward or backward, so 46, 56, 66 and 98, 88, 78			
Know by heart doubles and halves of all numbers to 20 (only halves of even numbers) double 15 = 30, half 18 = 9			
Know by heart addition and subtraction facts for each number up to 20, so $7 + 8$, $16 - 9$, $9 + 5$...			
Recognise the inverse relationship between addition and subtraction e.g. $13 + 6 = 19$, $6 + 13 = 19$, $19 - 6 = 13$, $19 - 13 = 6$			
Know by heart all multiplication facts and division facts for 2, up to 2×12			
Know by heart all multiplication facts and division facts for 5, up to 5×12			
Know by heart all multiplication facts and division facts for 10, up to 10×12			
Know by heart all doubles of multiples of 10 up to 100 e.g. double 30, double 70			
Tell the time to quarter past and quarter to on an analogue clock			

Earth

Know by heart all sums and differences of multiples of 10 up to 100, so $40 + 30$, $20 + 50$, $90 - 40$, $70 - 30$			
Know by heart all halves of numbers to 20, so half $17 = 8\frac{1}{2}$			
Count from zero in steps of 3, 4 and 8			
Know by heart all number bonds (multiples of 5) to 100, so $25 + 75$, $65 + 35$, $15 + 85$...			
Quickly complete addition and subtraction calculations that involve bridging over multiples of 10 e.g. $37 + 5 = 42$ $54 - 6 = 48$			
Quickly complete addition calculations that involve partitioning e.g. $23 + 24 = 47$			
Quickly complete subtraction calculations that involve finding the difference e.g. $52 - 45$			
Know the number of seconds in a minute, minutes in an hour and hours in a day. Know the number of days in a week, month and year, including leap years			
Tell the time to the nearest 5 minutes on an analogue clock			

Mars

Count from zero in steps of 25 and 50			
Know by heart all number bonds that total 100, so $49 + 51 = 100$, $33 + 67 = 100$			
Know by heart all multiplication facts and division facts for 3, up to 3×12			
Know by heart all multiplication facts and division facts for 4, up to 4×12			
Know by heart all multiplication facts and division facts for 8, up to 8×12			
Know the number of g in kg, ml in l, mm in cm, cm in m and m in km			
Know by heart all doubles of multiples of 5 up to 50 e.g. double 45, double 15			
Know by heart all halves of all multiples of 10 up to 100 e.g. halve 60, halve 70			
Tell the time to the nearest minute on an analogue clock			

Jupiter

Count from zero in steps of 15			
Double any 2 digit number...double 42, double 67, double 88			
Halve any even 2 digit number...halve 50, halve 86			
Halve any 2 digit number...halve 53, halve 67			
Quickly complete addition and subtraction calculations that involve bridging over multiples of 100 e.g. $370 + 50 = 420$ $540 - 60 = 480$			
Quickly complete addition calculations that involve partitioning with hundreds and tens e.g. $230 + 240 = 470$			
Quickly complete subtraction calculations that involve finding the difference with hundreds and tens e.g. $520 - 450$			
Know by heart all multiplication and division facts for 6, up to 6×12			
Know by heart all multiplication and division facts for 9, up to 9×12			
Know by heart all multiplication and division facts for 11, up to 11×12			

Saturn

Count from any number in steps of 6			
Count from any number in steps of 7			
Count from any number in steps of 9			
Count up and down in tenths from any given number			
Know by heart 1 tenth more of any given number			
Know by heart 1 tenth less than any given number			
Know by heart all multiplication and division facts for 7, up to 7×12			
Know by heart all multiplication and division facts for 12, up to 12×12			
Convert between analogue and digital 12- and 24- hour clocks e.g. Twenty five to three in the afternoon – 2:35pm – 14:35			

Uranus

Quickly complete addition and subtraction calculations that involve bridging over whole numbers e.g. $3.7 + 0.5 = 4.2$ $5.4 - 0.6 = 4.8$			
Quickly complete addition calculations that involve partitioning with decimals e.g. $2.3 + 2.4 = 4.7$			
Quickly complete subtraction calculations that involve finding the difference with decimals e.g. $5.2 - 4.5$			
Use knowledge of time facts to write equivalent times to multiples of $\frac{1}{4}$ of a unit e.g. 180 seconds = 3 minutes, 5 $\frac{1}{4}$ hours = 5 hours 15 mins = 315 mins			
Use knowledge of mass and weight facts to write equivalent measures e.g. 3.75kg = 3750g, 5678g = 5.678kg			
Use knowledge of volume and capacity facts to write equivalent measures e.g. 7.45l = 7450ml, 3278ml = 3.278l			
Use knowledge of length facts to write equivalent measures e.g. 5.2km = 5200m, 22mm = 2.2cm			
Know the tests of divisibility to recognise multiples of 3 and 6			

Neptune

Add and subtract 2 fractions with the same denominator within one whole			
Add and subtract 2 fractions with the same denominator			
Starting at any given number count forwards and backwards in steps of any number, including through zero to include negative numbers			
Double any number with up to 1 decimal place			
Halve any number with up to 1 decimal place			
Recall quickly multiplication facts up to 12 x 12 and use them to multiply pairs of multiples of 10 and 100 e.g. 30 x 70, 40 x 200			
Use knowledge of place value and x facts to 12 x 12 to derive related multiplication and division facts involving decimals e.g. $0.8 \times 7 = 5.6$			
Know the test of divisibility to recognise multiples of 9			

The Milky Way

Identify pairs of factors for all 2 digit whole numbers			
Know by heart all the squares of numbers up to 12×12			
Know by heart all the cubes numbers up to 12^3			
Recognise and recall factors of numbers up to 100 and corresponding multiples of 100			
Recall quickly division facts of all tables up to 12×12 and use them to divide pairs of multiples of 10 and 100, e.g. $240 \div 40 = 60$			
Know by heart and use the tests of divisibility for multiples of 2, 3, 4, 5, 6, 9 and 10			
Know ways to work out if a number is a multiple of 7 or 8			
Calculate simple percentages e.g. 25% of $140 = 35$			
Recall all prime numbers less than 100			