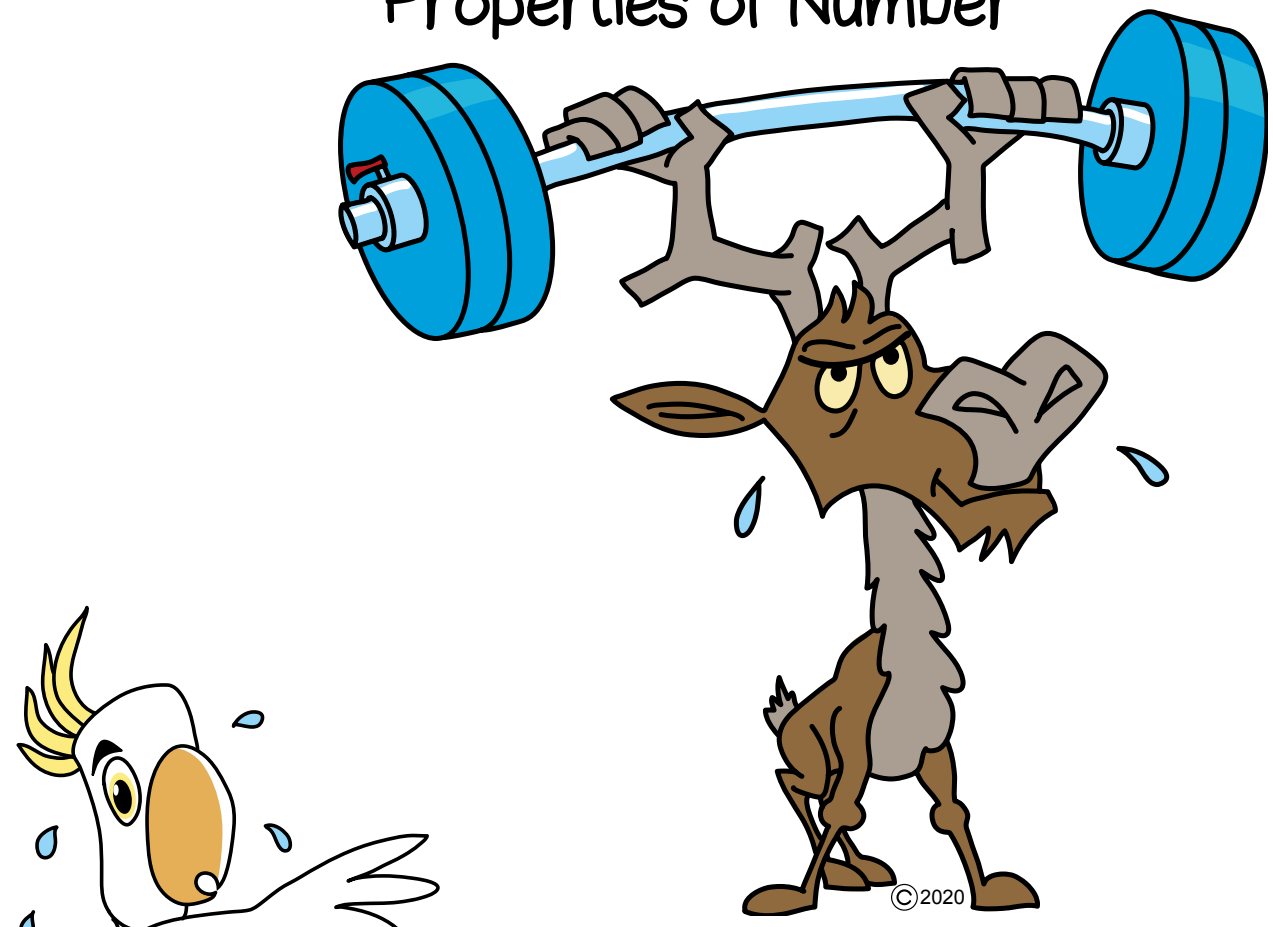
Colin and Coco's Deliberate Practice

Year 5 Unit 6

Multiplication and Division Answers
Properties of Number



Contents

This pack of deliberate practice is designed to be used flexibly to secure the manageable steps of this unit.
The table below indicates which activities are linked to which mangeable steps.

	Do It	Challenge It	Play It
Find prime numbers up to 20	1		1, 3
Find prime and composite numbers up to 20	1		1
Express a given number as the product of prime factors		1	
Know how to test if a number up to 100 is prime	2		3
Find the common factors of two numbers		2	2
Find multiples of a given number			2
Find square numbers and use the notation for squared	3	3	3
Find cube numbers and use the notation for cubed	3	3	3

Do It 1

Write Prime (P), Composite (C) or neither next to each number.

1	Neither	6	C	11	P	16	C
2	P	7	P	12	C	17	P
3	P	8	C	13	P	18	C
4	C	9	C	14	C	19	P
5	P	10	C	15	C	20	C

Challenge It 1

The product of three prime numbers (A, B and C) is a multiple of 10

A x B x C = Multiple of 10

Find values for A, B and C in several different ways.

Prime Number Game

Play It 1

You need:
1 - 6 Dice

To play:
Roll two dice to create a 2-digit number.
This number is the sum of prime numbers.
Each player finds as many different ways as possible to find the sum.

For example: 2 and 4 are rolled so players need to make the sum of 24

24 = 19 + 5
24 = 17 + 3 + 2 + 2
24 = 11 + 11 + 2 and so on

Players score one point for each correct calculation.
The player with the largest number of ways to find the sum scores a bonus point.

The dice are rolled again to find a new sum, and play continues.

To win:
The winner is the first player to score 30 points or more.

Do It 2

Find all the prime numbers between:

20 and 30	23, 29	60 and 70	61, 67
30 and 40	31, 37	70 and 80	71, 73, 79
40 and 50	41, 43, 47	80 and 90	83, 89
50 and 60	53, 59	90 and 100	97

Challenge It 2

Put digits in the empty boxes to complete each statement in several different ways.

□ and □ are common factors of □

□ and □ are common factors of □□

□ and □□ are common factors of □□

□□ and □□ are common factors of □□

Multiples Game

You need:
0 - 9 Dice

To play:
Each player rolls the dice three times to get three starting numbers.
(If a player throws a 0 or 1, roll the dice again.)
Players use only these three starting numbers to find multiples for the whole game.

Now players take turns to throw the dice to make a 2-digit number.
If the 2-digit number is a multiple of any of their three starting numbers, the player scores one point.

To win:
The winner is the first player to score 10 points.

Do It 3

Find the square numbers between:

0 and 30	1, 4, 9, 16, 25
30 and 60	36, 49
60 and 90	64, 81
90 and 150	100, 121, 144

Find the cube numbers between:

0 and 30	1, 8, 27
30 and 60	
60 and 90	64
90 and 150	125

Challenge It 3

Put numbers in the empty boxes to complete the statements in several different ways where possible

Possible Solution

$$\boxed{3}^{2} - \boxed{2}^{3} = \boxed{1}^{2}$$

$$\boxed{5}^{3} - \boxed{11}^{2} = \boxed{2}^{2}$$

$$\boxed{8}^{2} = \boxed{4}^{3}$$

Squares, Cubes and Primes Game

Play It 3

You need:
0 - 9 Dice

To play:
Each player rolls the dice twice to make a 2-digit number.
Both players now try to make this number by finding the total of prime, square and cube numbers.

If a player only uses prime numbers, they score one point.
If a player uses a combination of two types of numbers, they score two points.
If a player uses a combination of three types of numbers, they score three points.

To win:
The winner is the first player to score 20 points.