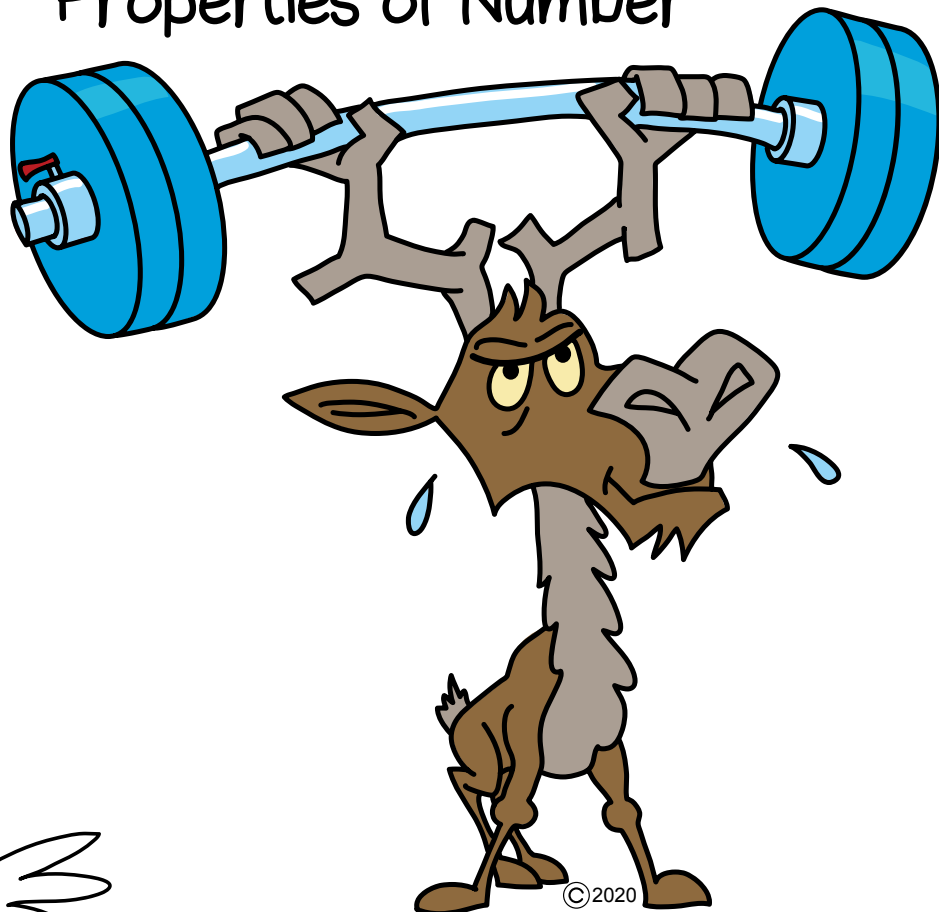




Colin and Coco's Deliberate Practice

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 manageable 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



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

1		6		11		16	
2		7		12		17	
3		8		13		18	
4		9		14		19	
5		10		15		20	

Challenge It 1

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

$$A \times B \times C = \text{Multiple of 10}$$

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

$$24 = 19 + 5$$

$$24 = 17 + 3 + 2 + 2$$

$$24 = 11 + 11 + 2 \text{ and so on}$$

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

60 and 70

30 and 40

70 and 80

40 and 50

80 and 90

50 and 60

90 and 100

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

Challenge It 2

and are common factors of

and are common factors of

and are common factors of

and are common factors of



Multiples Game

Play It 2

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

30 and 60

60 and 90

90 and 150

Find the cube numbers between:

0 and 30

30 and 60

60 and 90

90 and 150

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

Challenge It 3

$$\square^2 - \square^3 = \square^2$$

$$\square^3 - \square^2 = \square^2$$

$$\square^2 = \square^3$$



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.