Level 18 Card 1 Times tables x2, x5, x10, x3, x4, x6, x7, x8, x9, 11

1. Addition and Subtraction

Example (Addition):

23 +48

20 + 40 +3+8 = 60 + 11 = 71

Use this strategy to add and subtract these numbers.

a) 35 + 47 =	b) 29 + 62 =	c) 75 + 36 =

d) 45 – 23 =	e) 63 + 56 =	f) 67 - 42 =

g) 89 + 19 =	h) 55 + 73 =	i) 95 - 32 =

j) 64 + 26 =	k) 31 + 56 =	l) 79 – 53 =

m) 235 + 473 =	n) 278 - 162 =	o) 375 + 203 =

2. Multiplication

a) 7 8   b) 9 4   c) 7 6 6   d) 8 3 5
  x 9   x 8   x 5   x 4
_____   _____   _____   _____

e) 7 2 0   f) 3 9 9   g) 4 9 1   h) 2 0 6 5
  x 7   x 8   x 4   x 3
_____   _____   _____   _____

i) \$6.12   j) \$7. 93   k) \$8. 05   l) \$8 0. 2 7
  x 3   x 6   x 4   x 7
_____   _____   _____   _____

Level 18 Card 2

1. Addition and Subtraction of Decimals

a) 1.67   b) 5.34   c) 36.66   d) 43.63
+ 3.21   - 3.16   + 45.76   - 22.64
_____   _____   _____   _____

e) \$90.14   f) \$473.92   g) \$267.47   h) \$23.70
 - 47.32   - 4.08   - 89.29   + 55.35
_____   _____   _____   _____

2. Addition and subtraction of decimals

a) .3 +. 7 =	b) .4 +. 6 =	c) .1 + .9 =	d) .2 + .8 =
e) 1 + .4 =	f) 1 - .2 =	g) 1 - .1 =	h) .3 - .2 =

i) .3 + $\frac{2}{10}$	j) 1 - $\frac{3}{10}$	k) .4 $\frac{5}{10}$	l) ½ + .4

3. Addition and subtraction of fractions

a) ⅖ + ⅕	b) ⅓ - ⅙	c) ⅜ + ¼	d) ⅔ - ⅙

4. Show these as improper fractions:

a)2 ⅓ b) 4 ½ c) 7⅓ d) 12 ¼ e) 6⅜ f) 4⅘ g) 8⅚

5. **When counting by quarters**, put these in order from smallest to largest: ¾, ½, ¼, 1
6. If Pita ate ¼ of a pizza and Ramesh ate ⅜ of a pizza, how much pizza did they eat altogether?

Level 18 Card 3

1. Write fractions (or mixed numbers) for these decimals.

a) 0.6 =   c) 0.49 =   e) 2.64 =

b) 0.83 =   d) 0.07 =   f) 1.56 =

2. Write the Place Value of each underlined digit, e.g thousands, hundreds, tens, ones, tenths, hundreds)

a) 2**8**.16   b) 36.**9**8   c) 18.2**9**   f) **7**.78

g) **5**63.78   h) 77.**6**5   d) **2**405.67   h) 345.4**5**

3. Arrange the set of decimals from smallest to largest.

a) 0.65   0.87   0.36   0.75

b) 7.63   8.36   9.01   35.65

c) .02   3.02   3.2   1.97

d) 0.35   0.03   0.56   0.48

4. Write true (t) or false (f)

a) 0.4 > 0.45   b) 0.37 > 0.73   c) 1.9 < 9.1

d) 0.61 < 0.07   d) 0.08 > 0.02   g) 1.04 > 1.40

Level 18 Card 4

1. Counting with decimals

.3,   .6,   .9,   1.2,   1.5, ...3

2. Problem solving

Shoes cost $75.35;   Skateboard costs $82.45;   Video Game costs $79.90 ; Flash drive costs $16.35; Cap costs $15.70

a) Find the cost of a cap and shoes.

b) How much would two skateboards and a flash drive cost?

c) If Tomasi had saved $95.00, would he have enough to buy a video game?

d) How much more do shoes cost than three caps?

3. Place value

a)216.00 x 10 = □   b) 216.00 x 100 = □

c) 2.16 x 10 = □   c) 2.16 x 100 = □

d) 216 ÷ 10 = □   e) 216 ÷ 100 = □

4. Mathematical sentences

a) 4 + (9 +6) = (4 +□) + 6

b) 10 + (2 + 9) = (10 +□) + 9

c) 7 + (2 x 3) = (3 x □) + □

d) 9 + (2 x 5) = (5 x 2) x □

e) 10 + (5+6) = (10 + □) + 4

Level 18 Card 5

1. Counting patterns

a) 1, 19, 2, 18, 3, 17, ………… 8, 12

b) 1, 2, 2, 4, 3, 6,…………………8, 16

c) 9, 23, 10, 22, 11, 21, ……….15, 17

2. Complete each pattern

a) 5 x 4 = 20   5 x .4 = □   5 x .04 = □   .5 x .4 = □

b) 96 ÷ 12 = 8   96 ÷ 1.2 = 80   9.6 ÷ 12 = □   9.6 ÷ 1.2 = □

3. Multiplying by tens

Example: 279
        x 70
        _____
     20650

Step 1: Put the 0 down because you are multiplying by a ten. Step 2: Multiply by 7.

a)   2 3   b) 8 7   c) 5 4   d) 1 9
   x 3 0   x 7 0   x 4 0   x 6 0
   _____   _____   _____   _____

e) 1 4 8   f) 3 4 2   g) 1 2 9   h) 1 9 4
   x 5 0   x 2 0   x 3 0   x 6 0
   _____   _____   _____   _____

4. Problem solving

A fish seller sold 40 fish at $78 each. How much did he earn?

Level 18 Card 6

1. Multiplying Decimals

a) 2.13   b) 7.46   c) 17.96
   x 3   x 9   x 6
   _____   _____   _____

d) 13.8   e) $39.27   f) $400.05
   x 5   x 8   x 4
   _____   _____   _____

2. Solve these problems.

a) Paula bought 8 books costing $10.95 each. How much did he spend?

b) Meena bought 5 softballs at $6.95 each. What would be her change from $40.00 note?

c) How much timber would be left if a carpenter cut nine 1.75m lengths from a 20m timber?

d) Tina's cat weighs 2.6 kilograms. Her dog weighs 4 times as much as her cat. How much does her dog weight in kilograms?

e) A tea café uses 27.5 litres of milk a day. If they have a weekly delivery of 180 litres, how much milk will they have left after six days?

f) At an Athletics Meet, an average of 123 athletes from 30 schools participated. How many athletes altogether took part?

Level 18 Card 7

1. Multiplying Decimals by 10 and 100
To multiply by 10, move the decimal point to the right *one* space, *(10 has one zero)*
e.g. 0.49 x 10 = 4.9
To multiply by 100, move the decimal point *two* spaces to the right, *(100 has two zeros).*
e.g. 2.65 x 100 = 265. = 265

a) 0.04 x 10 =   b) 8.46 x 10 =
c) 0.04 x 100 =   d)8.46 x 100 =
e) 0.56 x 10 =   f) 32.4 x 10 =
g) 0.56 x 100 =   h) 32.4 x 100 =

2. Problem solving
a) Tamana's Poultry Farm produces an average of 2156 eggs each day. How many eggs will be produced in the month of June?
b) How many minutes are there in 18 hours?

3. Number patterns. Write the next three numbers.
a) 6, 13, 20, 27, ___, ___, ___
b 46, 58, 70, 82, ___, ___, ___
c) 3, 18, 33, 48, ___, ___, ____
d) 3, 12, 21, 30, ___, ___, ___

Level 18 Card 8

1. Dividing by Tens

3 x 60 = ___	180 ÷ 60 = ___
7 x 40 = ___	280 ÷ 40 = ___
6 x 60 = ___	360 ÷ 60 = ___
2 x 40 = ___	80 ÷ 40 = ___
8 x 50 = ___	400 ÷ 50 = ___
3 x 90 = ___	270 ÷ 90 = ___
4 x 60 = ___	240 ÷ 60 = ___
5 x 30 = ___	150 ÷ 30 = ___
9 x 80 = ___	720 ÷ 80 = ___
2 x 60 = ___	180 ÷ 60 = ___

3. Dividing Decimals by 10 and 100
To divide by 10, move the decimal point to the left *one* space, *(10 has one zero),* e.g. 2.8 ÷ 10 = 0.28
To divide by 100, move the decimal point to the left *two* space, *(100 has two zeros),* e.g. 0.4 ÷ 100 = 0.004 (You need to write zeros in front of the number.)

a) 0.7 ÷ 10 = _____   b) 34.9 ÷ 10 = _____
c) 0.7 ÷ 100 = _____d) 34.9 ÷ 100 = _____
e) 5.6 ÷ 10 = _____ f) 21.03 ÷ 10 = _____
g) 5.6 ÷ 100 = _____ h) 21.03 ÷ 100 = _____

Level 18 Card 9

1. Division

a) If I started with 7,782 and kept on subtracting 6 until I reached zero, how many subtractions would I make? $9,783 - (9 \times \square) = 0$

b) By what must I multiply 7 to get the answer, 9,730?

c) Divide 4,709 by 8

d) Divide 6,260 by 7

2. Problem solving with division

a) A school has $6,149 to spend on new chairs. If each chair costs $9, how many chairs will the school be able to buy?

b) Mrs Loloma collected and polished 936 shells to make bracelets. If 20 shells are put into each bracelet, how many bracelets can be made?

c) A Suva car company wants to move 540 cars to Savusavu in Vanua Levu. If the ferry carries 40 cars at a time, how many trips will it make?

d) Twelve buses, each holding and equal number of children, were used to take 468 children to the sports. How many children were there in each bus?

e) A guitar teacher holds lessons for two hours each Monday and Wednesday. The lessons go for 30 minutes each. How many lessons does he take over the 2 days?

Level 18 Card 10

1. Extended Multiplication (Long Multiplication)

```
   53          (Example)
X 27
____
   21
  350
   60
 1000
_____
 1431
```

Set these out the same way:

a) 54 x 43   b) 65 x 53   c) 49 x 53

d) 77 x 19   e) 63 x 48   f) 50 x 44

g) 109 x 27   h) 78 x 43   i) 178 x 43

2. Problem solving

a) If a vegetable grower planted 57 rows of cabbages with 136 cabbages in each row, how many cabbages did he plant altogether?

b) Kara is 8 years old and her sister Joanna is 7. When Kara is twice as old as she is now, how old will Joanna be?

c) 15 sacks of potatoes each contain 120 potatoes. How many potatoes?

Level 18 card 11

1. **Multiplying Fractions**

    4 x ⅚   b)2 x ⅘   c) 5 x ⅔   d) 3 x ⅞   e) 4 x ⅖

2. **Solve these problems.**

    a) If six students ate 3/8 of a pizza, how many pizzas did the children eat?

    b) Mum bought six ½ kg bags of onions. How many kilograms of onions did she buy?

    c) Mere buys ½ a litre of milk daily for 5 days. How much milk does she buy in a week?

    d) Tomasi had $1.00 to spend. How much was the pen he bought if it was equal to ¼ of his money?

    e) Raju watched thirty planes land at Nausori Airport. Five-sixths of them were from Fiji Airways. How many planes were not from Fiji Airways?

    f) Miss Fong has fourteen plants. Half of them have flowers. How many of her plants don't have flowers?

    g) There are forty students in our class. Three-fifths of the students are boys. How many girls are in our class?

Level 18 Card 12

1. **Problems solving with fractions**

    a) Which of the answers is greater than ⅜ but less than ⅝? A) ¾ B) 1 C) ¼ D) ½

    b) Salote was given a cake. If her friend ate ⅕ of it and she ate 3/10, how much cake was left?

    c) Jale bought a packet of 60 biscuits on Saturday. On Sunday he ate half of them. On Monday he ate 19 of them. How many biscuits did he have left for Tuesday?

    d) Mrs Lal made a fruit salad with ⅚ of a kilogram of pawpaw and ½ of a kilogram of guavas. How many kilograms of fruit did she use in all?

2. **Equations**

Write true (t) or false (f) for the following:

a) 8 x (1 + 2) = (8 x 1) + (8 x 2)

b) 6 x (7 +8) = (7 x 6) + (8 x 6)

c) 10 x (4 + 6) = (4 x 10) + (4 x 6)

d) 3 x (9 + 7) = (9 x 3)+ (9 x 7)

e) 13 x (9 +10) = (13 x 9) x (13 x 10)

f) 12 x (10 + 9)=(12 x 10) +(12 x9)

Level 18 Card 13

1. Dividing Decimals
a) 8.42 ÷ 2   b) 47.65 ÷ 5   c) 6.75 ÷ 10

3. Problems with dividing decimals
a) Soft Toilet Roll is 5 for $2.25. How much is one roll?
b) Tomato Sauce is 3 for $1.85. How much for one bottle?
c) Soap is 5 for $2.15. How much for one?

4. Money problems
a) If three people went for a haircut and it was $6.45 for each of them. How much would it cost altogether?
b) What's the difference between $3.75 and $4.85?
c) If I have $20.50 and I spend $7.31, how much do I have left?
d) Petrol costs 80c per litre. How many litres can I buy for $40?
e) If two men worked on a car for 3 hours. The one man's labour is $5 per hour, the other man's $3.50 per hour. What is the total bill for labour?
f) I went to the shop and bought some groceries for my Mum. They cost $29.65. If Mum gave me $40.00, how much change did I get?

Level 18 Card 14
1. Money Problems
a) Khusbu gets 50c pocket money each week. She is saving for a new pencil case, which costs $4.00. How many weeks will she have to save for until she has enough money to buy it?
b) Marika would like a new ruler set that costs $9.50. He gets 50c per week. How long will he have to save for until he can buy it?

2. Household budget problems
Mr and Mrs. Samu have three children. Each week, Mr Samu earns $200 and Mrs Samu earns $100.
a) How much do they earn altogether?
Each week they have to pay the following bills:
Food - $90   *Rent* - $30   *Bus fares* - $10
Gas & electricity - $40   *School meals* - $30
Clothes - $20   *House insurance* - $10
b) How much money do they have left?
c) If Mrs Samu lost her job, would they have enough money?
d) What advice would give Mrs Samu so that she is able to save money?

Level 18 Card 15

1. Union Of sets

Two sets can be "added" together to form the union of the two sets.

When we do this, the union of the two sets contains all the elements of both sets.

If Set A = {1, 2, 3, 4, 5} and Set B = {2, 4, 6}, then the union of these sets is: A U B = {1, 2, 3, 4, 5, 6}.

U is the symbol for set union.

a) Write the union of Set C = {15, 17, 19, 21) and Set D = {14, 16, 18, 20}

b) Write the Union of Set X = {red, yellow, blue} and Set Y = {green, purple, orange)

2. Equivalent Sets

Write true (t) if the cardinal number is the same in these. Write false (f) if it's not.

a) {numbers less than five} {Letters of the word 'BOAT}

b) {a, b, c, d} {Δ, o, □, ∇}

c) {Days of the week} {Letters of the word 'HONESTY'}

d) {Letters of the word 'MEMBER} {Letters of the word 'REMEMBER'}

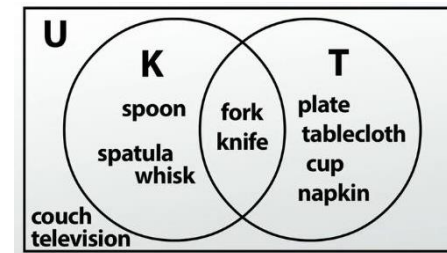e) {1, 3, 5, 7} {set of odd natural numbers less than 10}

Level 18 Card 16
Intersection of Sets

When two sets have members that are the same, we say the sets *intersect*.

The *intersection* of two sets is when the same things are in both sets. This can be shown by a *Venn diagram*.

Example:

In a house there is a set of **K**itchen cooking equipment and a set of **T**able equipment. See how the fork and knife are common to both? They *intersect*.

The intersection of the two sets is K ∩ T = {fork, knife}.

∩ is the symbol for set *intersection*.

Try this:

Set P = {3, 4, 5, 6, 7} and Set Q = {5, 6, 7, 8, 9, 10}. The intersection of these sets is P ∩ Q = {………………}.

Draw it as a Venn diagram.

Level 18 Card 17

Measurement: Weight / Mass

What's the difference between weight and mass? Mass is a measurement of how much matter is in an object; weight is a measurement of how hard gravity is pulling on that object.

Estimate the weight of the following.

Scissors

Pencil case

Jam jar

Watch

Rubber

Paper punch

Convert these measurements to a different unit of mass.

1 000 grams = 1 kilogram   1 000 g = 1 kg

a) 5 kg = ☐ g   b) 7.5 kg = ☐ g
c) 3.5 kg = ☐ g   d) 100 kg = ☐ g
e) 10 kg = ☐ g   f) 10.5 kg =☐ g
g) 9 041 g = ☐ kg   h) 733g = ☐ g

Problem Solving

A jar of peanut butter has a mass of 1.340 kg. If the jar's mass is 235 g, what is the mass of the peanut butter?

Level 18 Card 18

Measurement: Time and Temperature

1. **Read and write time in digital and analogue time** in Words, (12-Hour Time 24-Hour Time)

Example: Four o'clock in the afternoon   4:00 pm   1600 hours

a) Midnight
b) Five past four in the afternoon
c) Midday

2. **Word Problem**

The Yasawa Flyer left Naviti Island at 10.30am; it reached Nacula Island after 1 hour 44 minutes. At what time did it arrive in Nacula Island? (Use am or pm for your answer.)

Temperature

The Fahrenheit scale was developed by German-born Gabriel Daniel Fahrenheit in 1714 to go with his new invention, the mercury thermometer. Zero was the coldest temperature that Fahrenheit could create with a mixture of ice and ordinary salt. Water freezes at 32°F; it boils at 212°F.

Anders Celsius, a Swedish astronomer, introduced his scale in 1742. He used the freezing point of water as zero and the boiling point as 100. The Celsius scale, also called centigrade, is part of the metric system and is used throughout the world.

Activity: Record the temperature for one week, beginning on Monday for the five school days. First estimate the temperature and then use the thermometer to take the actual reading.

Level 18 Card 19

Geometry

Geometry is the study of shapes

What are shapes? Shapes are flat two-dimensional objects, whether regular or irregular. Shapes also include three dimensional objects. Shapes can also be one dimensional. Geometric figures can have one, two, or three dimensions

What is dimension? Dimension is a measure in one direction.

One dimensional shapes are shapes that are measured in only one direction, e.g. a square or a triangle

Line segment Ray

A line segment starts at a point and ends at another, e.g.

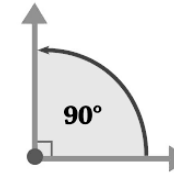Above is a line segment with the symbol AB

Draw a line segment 6cm in length and name it: 'AZ'.
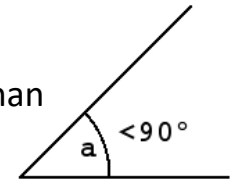
Level 18 Card 20

Geometry: Types of angles

Right Angle

A right angle is made when the two rays are *perpendicular* to each other.
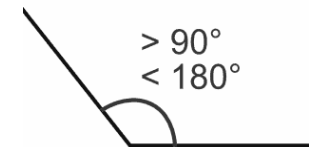

Acute Angle

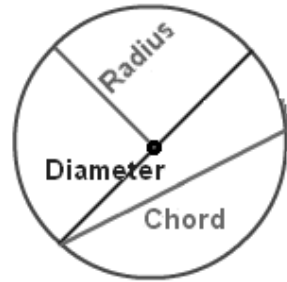The angle is less than a right angle (less than 90◦)

Obtuse Angle

Bigger than a right angle but less than two right angles. More than 90◦ but less than 180◦.

Level 18 Card 21

Geometry: The Circle

Study the diagram and complete these sentences.

1. Center

The middle of a _____ is the same distance from the _____ to any point of the circle.

2. Diameter

A _____ segment that passes through the _____ of a circle and has its endpoints on the opposite side of the _____. The diameter cuts the circle into _____ equal parts. One part is called a semi-circle.

3. Radius

A _____ segment with one endpoint at the _____ of the circle and the other endpoint on the _____.
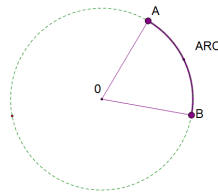
_____ radii (plural of radius) make one _____.

4. Circumference

This is the distance around the _____.

5. Chord

A _____ segment that has its endpoints on opposite sides of the_____ but does not pass through the _____.

6. Arc

This is any part of the curve on the circumference of a _____.

Level 18 Card 22 Test

1. 23 + 48 = 20 + 40 +3+8 = 60 + 11 = 71

   In the same way, set out 72 + 39.

2. 54

   X 8

   ----

3. 87.02

   + 3.21

   ----

4. Subtract .2 from 1 =

5. Write 3 ½ as an improper fraction.

6. Arrange the set of decimals from smallest to largest.

   0.65   0.87   0.36   0.75

7. 2 x 40 = ____ 80 ÷ 40 = ____

8. Set out, and work out 46 x 32 as a long multiplication.

9. Mum bought seven ½ kg bags of potatoes. How many kilograms of potatoes did she buy?

10. True or false?   6 x (7 +8) = (7 x 6) + (8 x 6)

11. How much change from $50 if I spent 24.95?

12. Continue the pattern: 3, 6, 12, 24, ___, ___, ___, ___

13. 0.04 x 10 =

14. 6.75 ÷ 10 =

15. A rectangular garden is 2.5 metres wide, 6.2 metres long. What is the perimeter?

16. A baking tray is 30 cm long and 15 cm wide. What is the area?