Resources

Application of Number

Level 3 Units 1 and 2

Practice Sheets

Level 3: Application of Number
Units 1 and 2

Practice Sheet N1

Use your calculator to complete the following.

(a) 1.45 + 0.89 =

(b) $\frac{2}{7}$ x $\frac{1}{7}$ =

(c) 2 .5– 0.156 =

(d) 19.875 ÷ 4 =

(e) 15.78÷ 2=

(f) $\frac{1}{5}+\frac{2}{3}+\frac{1}{4}=$

(g) €4.90÷ 3=

(h) $\frac{2}{3}-\frac{4}{11}=$

(i) $\frac{5}{9}x\frac{2}{7}=$

(j) 1.75 ÷ 0.70 =

(k) $\frac{8}{11}\div\frac{7}{1}$ =

(l) $\frac{5}{6}\div 0.54 =$

(m) 15.78 ÷ $\frac{3}{7}=$

(n) 11.57 – 15.87 =

Practice Sheet N2

Add the following natural numbers.
Show your workings on the sheet.

(a) 23 + 46

(b) 10 + 42

(c) 19 + 51

(d) 67 + 7

(e) 5 + 59

(f) 89 + 27

(g) 8 + 79

(h) 31 + 12

(i) 76 + 90

(j) 41 +11

(k) 7 + 10 + 61

(l) 8 +17 + 31

(m) 62 + 135 + 201

(n) 91 + 157 + 300

Practice Sheet N3

Subtract the following natural numbers.
Show your workings on the sheet.

(a) 40 - 10

(b) 35 - 9

(c) 45 - 32

(d) 81 - 9

(e) 90 - 53 - 2

(f) 36 - 6 - 3

(g) 68 - 15 - 44

(h) 88 - 47

(i) 36 - 9

(j) 75 - 19

(k) 88 - 10 - 6

(l) 54 - 42 - 12

(m) 34 - 5 - 18

(n) 543 - 41 - 79

(o) 140 - 32 - 53

(p) 716 - 467 - 20

(q) 1540 - 550

(r) 99 - 24 - 18

(s) 1437 - 153 - 22

(t) 6700 - 355 - 27

Practice Sheet N4

Add and subtract the following natural numbers.
Show your workings on the sheet.

(a) 44 + 10 - 39

(b) 35 - 9 + 13

(c) 66 - 33 + 85

(d) 81 - 9 + 45

(e) 90 - 54 + 99

(f) 56 + 5 - 17

(g) 68 - 15 - 44

(h) 65 - 10 + 41

(i) 37 + 13 - 20

(j) 85 - 19 + 15

(k) 14 - 10 + 68

(l) 12 + 24 - 12

(m) 98 - 34 + 25

(n) 456 - 321 + 66

(o) 89 - 75 + 3

(p) 54 + 83 - 29

(q) 1540 - 550

(r) 99 - 24 - 18

(s) 1502 - 222 + 76

(t) 34 + 99 - 5

Practice Sheet N5

Are following true or false? Tick the appropriate box.

(a) $6 \in Z$	True		False	
(b) $-5 \in N$	True		False	
(c) $-4 \in Z$ and $\in N$	True		False	
(d) $76 \in Z$	True		False	
(e) $-9 \in$ N and Z	True		False	
(f) - 4 is greater than 2	True		False	
(g) 3 is greater than -2	True		False	
(h) $-5 < -3$	True		False	
(i) $-7 > -9$	True		False	
(j) 0 is less than -1	True		False	
(k) $4 > -2$	True		False	
(l) $-10 > -8$	True		False	

Practice Sheet N6

Add and subtract the following integers.
Show your workings on the sheet.

(a) -35 +13

(b) -9 + 45

(c) 45 - 8

(d) 8 - 15 +3

(e) -3 + 17 - 6

(f) -98 - 7 - 32

(g) 36 - 60

(h)-9 - 75 + 99

(i) 21 - 60 + 43

(j) -15 + 27 + 9

(k) -74 - 92 + 5

(l) 8 - 25 - 6

(m) 1101 - 100

(n) -7 - 700 + 321

(o) -10 + 5 - 3

(p) -987 + 550 - 34

(q) 653 - 570 - 320

(r) 1250 - 1300 + 5

(s) -12 - 4

(t) 0 – 31

Practice Sheet N7

Multiply the following integers.
Show your workings on the sheet.

(a) 10 x -3

(b) 3 x 20

(c) 24 x 3

(d) -7 x 4

(e) -2 x -6

(f) -13 x 20

(g) 0 x 9 x 1

(h) -9 x -16

(i) 7 x 3 x 4

(j) -10 x 5

(k) 82 x -4

(l) 24 x 7

(m) -12 x -3

Practice Sheet N8

Divide the following integers.
Show your workings on the sheet.

(a) 16 ÷ 4

(b) -20 ÷ 4

(c) 49 ÷ - 7

(d) 225 ÷ - 25

(e) 45 ÷ - 3

(f) $^{978}/_{2}$

(g) $-\,^{90}/_{5}$

(h) $^{600}/_{-6}$

(i) - 450 - 30

(j) - 44 ÷ 11

(k) $-\,^{75}/_{3}$

(l) $^{63}/_{9}$

(m) - 69 ÷ 3

(n) -3 ÷ 3

(o) - 18 ÷ 0

(p) 56 ÷ 4

(q) $^{-25}/_{5}$

(r) - 180 ÷ -6

(s) - 81 ÷ 9

(t) $^{400}/_{9}$

Practice Sheet N9

Express each of the following as a single integer.
Show your workings on the sheet.

(a) $-8 - 12 \div -4 + 9$

(b) $(-5)(-8 + 12) + 39 \div -13$

(c) $-7 - 4 + 6(5 - 8)$

(d) $-(7 + 13) \div 5$

(e) $-(8 \times -6) \div 12 + 10$

(f) $16 \div 8 - 2 \times 4 + (5 - 6)$

(g) $45 \div 9 + 54 \div 9$

(h) $\dfrac{9(11) - 3(5 - 2)}{10}$

(i) $\dfrac{9(4) - 2(1)}{11}$

(j) $-(2 + 13)\ 5 + 15$

Practice Sheet N10

1. **Look at the numbers in the box below.**

2.5	$^1/_3$	0	1	40.75
1 million	-37	0.25	$^1/_5$	900

Are they all real numbers? Tick the appropriate box.

Yes ☐ **No** ☐

2. This is a list of all the numbers from the box above. For each one, decide if it is a **whole number, negative number, fraction** or **decimal.** Write your answer in the box beside each number.

2.5	
$^1/_3$	
0	
1	
40.75	
1 million	
-37	
0.25	
$^1/_5$	
900	

Practice Sheet N11

Insert the correct symbol between the two fractions in each case.

>	**is greater than**
<	**is less than**
=	**equals**

Use fraction circles to help you.

(a) $\frac{1}{2}$ $\frac{1}{3}$

(b) $\frac{1}{4}$ $\frac{1}{5}$

(c) $\frac{3}{4}$ $\frac{1}{4}$

(d) $\frac{1}{2}$ $\frac{2}{5}$

(e) $\frac{1}{3}$ $\frac{2}{6}$

(f) $\frac{3}{4}$ $\frac{5}{6}$

(g) $\frac{4}{15}$ $\frac{2}{3}$

(h) $\frac{3}{8}$ $\frac{1}{3}$

(i) $\frac{5}{6}$ $\frac{3}{4}$

(j) $\frac{3}{12}$ $\frac{1}{4}$

Practice Sheet N12

Fill in the spaces to show the equivalent fractions.
Use fraction circles to help you where possible.

(a) $\frac{1}{3} = \frac{\quad}{24}$

(b) $\frac{1}{7} = \frac{3}{\quad}$

(c) $\frac{6}{9} = \frac{\quad}{3}$

(d) $\frac{2}{5} = \frac{\quad}{10}$

(e) $\frac{3}{4} = \frac{\quad}{12}$

(f) $\frac{5}{8} = \frac{\quad}{16}$

(g) $\frac{6}{10} = \frac{\quad}{100}$

(h) $\frac{1}{5} = \frac{\quad}{10}$

(i) $\frac{5}{6} = \frac{\quad}{30}$

(j) $\frac{6}{15} = \frac{\quad}{5}$

(k) $\frac{8}{10} = \frac{4}{\quad}$

(l) $\frac{7}{10} = \frac{\quad}{100}$

Practice Sheet N13

Write down the number that should replace the question marks.

(a) 3 wholes = ? fifths

(b) ? thirds = 4 whole things

(c) $4\frac{1}{3}$ = $\frac{?}{3}$

(d) $\frac{?}{2}$ = $4\frac{1}{2}$

(e) $2\frac{3}{5}$ = $\frac{?}{5}$

(f) $\frac{8}{3}$ = ?

(g) $\frac{26}{10}$ = ?

(h) 1 = $\frac{?}{10}$

(i) $\frac{9}{5}$ = ?

(j) $5\frac{5}{7}$ = $\frac{?}{7}$

(k) $\frac{13}{5}$ = ?

(l) $\frac{6}{2}$ = ?

(m) $\frac{54}{10}$ = ?

(n) $\frac{14}{5}$ = ?

Practice Sheet N14

Add the following.
You can use fraction circles to help.

(a) $\frac{8}{2} + \frac{1}{8}$ ☐

(b) $\frac{2}{7} + \frac{1}{7}$ ☐

(c) $\frac{1}{3} + \frac{3}{2}$ ☐

(d) $\frac{1}{4} + \frac{1}{4}$ ☐

(e) $\frac{1}{15} + \frac{4}{15} + \frac{5}{15}$ ☐

(f) $\frac{1}{8} + \frac{5}{8} + \frac{2}{8}$ ☐

(g) $\frac{5}{8} + \frac{1}{8}$ ☐

(h) $\frac{4}{5} + \frac{2}{5}$ ☐

(i) $\frac{8}{15} + \frac{6}{15}$ ☐

(j) $\frac{5}{12} + \frac{2}{12}$ ☐

(k) $\frac{7}{8} + \frac{2}{8} + \frac{1}{8}$ ☐

(l) $\frac{3}{8} + \frac{2}{8} + \frac{5}{8}$ ☐

(m) $\frac{3}{5} + \frac{2}{5} + \frac{1}{5}$ ☐

(n) $\frac{6}{10} + \frac{2}{10} + \frac{3}{10}$ ☐

Practice Sheet N15

Add and subtract the following fractions.
You can use fraction circles to help.

(a) $\frac{1}{7} + \frac{1}{3}$ ☐

(b) $\frac{2}{5} + \frac{1}{6}$ ☐

(c) $\frac{2}{3} - \frac{1}{4}$ ☐

(d) $\frac{2}{9} - \frac{1}{3}$ ☐

(e) $\frac{3}{4} - \frac{1}{6}$ ☐

(f) $\frac{5}{6} + \frac{1}{3}$ ☐

(g) $\frac{3}{10} - \frac{1}{5}$ ☐

(h) $\frac{5}{9} - \frac{1}{6} + \frac{1}{3}$ ☐

(i) $\frac{3}{10} - \frac{1}{4}$ ☐

(j) $\frac{1}{6} - \frac{1}{4}$ ☐

(k) $\frac{1}{2} - \frac{1}{5}$ ☐

(l) $\frac{5}{9} - \frac{1}{4}$ ☐

Practice Sheet N16

Multiply the following fractions.
You can use fraction circles to help where possible.

(a) $\frac{3}{4} \times \frac{1}{2}$ ☐

(b) $\frac{3}{9} \times \frac{3}{4}$ ☐

(c) $\frac{4}{5} \times \frac{8}{15}$ ☐

(d) $\frac{1}{2} \times 2$ ☐

(e) $\frac{3}{7} \times \frac{7}{3}$ ☐

(f) $\frac{1}{2} \times 3\frac{1}{2}$ ☐

(g) $\frac{3}{4} \times \frac{1}{4}$ ☐

(h) $5\frac{3}{8} \times 1\frac{1}{3}$ ☐

(i) $\frac{3}{5} \times 30$ ☐

(j) $4\frac{1}{2} \times 3$ ☐

(k) $3\frac{1}{2} \times 3\frac{1}{2}$ ☐

(l) $\frac{1}{2} \times \frac{1}{5}$ ☐

Practice Sheet N17

Divide the following fractions.
You can use fraction circles to help where possible.

(a) $\frac{3}{4} \div \frac{1}{2}$ ☐

(b) $\frac{3}{9} \div \frac{3}{4}$ ☐

(c) $\frac{4}{5} \div \frac{8}{15}$ ☐

(d) $\frac{1}{2} \div 2$ ☐

(e) $\frac{3}{7} \div \frac{7}{3}$ ☐

(f) $\frac{1}{2} \div 3\frac{1}{2}$ ☐

(g) $\frac{3}{4} \div \frac{1}{4}$ ☐

(h) $5\frac{3}{8} \div 1\frac{1}{3}$ ☐

(i) $\frac{3}{5} \div 30$ ☐

(j) $4\frac{1}{2} \div 3$ ☐

(k) $3\frac{1}{2} \div 3\frac{1}{2}$ ☐

(l) $\frac{1}{2} \div \frac{1}{5}$ ☐

Practice Sheet N18

Identify how many ones, tenths and hundredths are in each real number.

a)	3.56	_____ ones	_____ tenths	_____ hundredths
b)	5.98	_____ ones	_____ tenths	_____ hundredths
c)	6.01	_____ ones	_____ tenths	_____ hundredths
d)	7.9	_____ ones	_____ tenths	_____ hundredths
e)	9.82	_____ ones	_____ tenths	_____ hundredths
f)	0.76	_____ ones	_____ tenths	_____ hundredths
g)	1.09	_____ ones	_____ tenths	_____ hundredths
h)	4.56	_____ ones	_____ tenths	_____ hundredths
i)	10.89	_____ ones	_____ tenths	_____ hundredths

Practice Sheet N19

Add the following real numbers.

(a) 2.65 + 3.17 ☐

(b) 4.53 + 8.96 ☐

(c) 6.7 + 8.94 ☐

(d) 4.5 + 8.95 ☐

(e) 34.67 + 1.42 ☐

(f) 0.67 + 57.98 ☐

(g) 67.6 + 8.92 ☐

(h) 15.50 + 13.56 ☐

(i) 92.16 + 18.65 ☐

(j) 56.7 + 1.32 + 6.93 ☐

(k) 7.89 + 9.06 + 11.23 ☐

(l) 45.5 + 16 + 3.65 ☐

(m) 5.67 + 8.01 + 6.9 ☐

(n) 32.43 + 16.41 + 90.76 ☐

(o) 86.87 + 7.4 + 4.5 ☐

(p) 6.54 + 4.56 + 9.06 ☐

(q) 23.5 + 76.2 + 5.09 ☐

r) 57.89 + 7.43 + 11.21 + 9.7 ☐

(s) 5.43 + 63.5 + 78.65 + 11.32 ☐

(t) 65.4 + 90.8 +7.65 + 33.45 ☐

Practice Sheet N20

Question 1

Subtract the following real numbers.

(a) 4.78 - 3.65 ☐

(b) 2.47 - 1.32 ☐

(c) 8.94 - 7.6 ☐

(d) 7.43 - 0.87 ☐

(e) 6.55 - 2.49 ☐

(f) 67.89 - 56.73 ☐

(g) 78.45 - 8.92 ☐

(h) 15.50 - 13.56 ☐

(i) 145.1 - 45.67 ☐

(j) 78.01 - 8.45 ☐

Question 2

Evaluate the following:

(a) 18.69 + 5.78 - 11.43 ☐

(b) 34.67 - 23.55 + 14.63 ☐

(c) 5.67 + 8.01 - 6.9 ☐

(d) 18.95 -18.67 + 3.25 ☐

(e) 56.98 - 34.11 - 17.89 ☐

(f) 68.01 - 45.79 + 11.3 ☐

(g) 56.04 - 17.89 + 5.75 ☐

(h) 5.82 - 0.45 - 3.61 ☐

(i) 18.46 - 17.32 - 1.14 ☐

(j) 18.73 + 11.14 + 0.5 - 30 ☐

Practice Sheet N21

Question 1

Multiply the following real numbers.

(a) 5.67 x 10 ☐

(b) 18.65 x 100 ☐

(c) 3.15 x 2 ☐

(d) 4.56 x 6 ☐

(e) 5.18 x 4 ☐

(f) 6.5 x 100 ☐

(g) 4.09 x 5 ☐

(h) 11.32 x 3 ☐

(i) 32.04 x 2 ☐

(j) 18.09 x 10 ☐

Question 2

Evaluate the following:

(a) 18.69 + 5.78 x 10 ☐

(b) (16.5 x 10) + (3.1 x 4) ☐

(c) 4.55 x 10 - 11.36 ☐

(d) 16.5 x 100 - 786.5 ☐

(e) (12.3 + 13.44) x 10 ☐

(f) 1.53 x 10 x 5 ☐

(g) (13.5 - 4.89) x 100 ☐

(h) 5.82 - 0.45 x 2 ☐

(i) 18.56 + 9.11 x 10 ☐

(j) (14.35 x 10) - (11.06 x 10) ☐

Practice Sheet N22

Question 1

Evaluate the following:

(a) 56.89 ÷ 10 ☐

(b) 18.65 ÷ 100 ☐

(c) 0.6 ÷ 10 ☐

(d) 1.34 ÷ 1000 ☐

(e) 16.84 ÷ 4 ☐

(f) 16.45 ÷ 5 ☐

(g) 44.37 ÷ 3 ☐

(h) 16.44 ÷ 6 ☐

(i) 32.04 ÷ 2 ☐

(j) 5.6 ÷ 10 ☐

Question 2

Evaluate the following:

(a) 9.65 - 3.05 ÷ 5 ☐

(b) 14.32 + 6.54 ÷ 2 ☐

(c) (4.86 x 10) ÷ 3 ☐

(d) (16.4 ÷ 4) + (11.2 ÷ 2) ☐

(e) (36.45 ÷ 5) x 3 ☐

(f) (15.44 - 2.63) ÷ 3 ☐

(g) 2.45 x 2 ÷ 10 + 4.1 ☐

(h) 16.5 ÷ 5 x 10 ☐

(i) 9.8 - 3.4 ÷ 2 ☐

(j) (14.3 ÷ 10) - (0.06 x 10) ☐

Practice Sheet N23

Question 1

Convert the following percentages to fractions in their simplest form.

(a) 50%		(b) 35%	
(c) 25%		(d) 10%	
(e) 5%		(f) 18%	
(g) 12%		(h) 24%	
(i) 100%		(j) 9%	
(k) 65%		(l) 72%	
(m) 150%		(n) 98%	
(o) 75%		(p) 67%	
(q) 12.5%		(r) 37.5%	
(s) 84%		(t) 32%	

Practice Sheet N24

Question 1

Convert the following decimals to fractions in their simplest form.

(a) 0.6 (b) 0.5

(c) 0.3 (d) 0.45

(e) 0.75 (f) 0.68

(g) 0.02 (h) 0.56

(i) 0.26 (j) 0.13

Question 2

Convert the following decimals and percentages to fractions in their simplest form.

(a) 0.23 (b) 11%

(c) 38% (d) 0.19

(e) 44% (f) 0.56

(g) 10% (h) 0.7

(i) 1.7 (j) 99%

Practice Sheet N25

Question 1

Convert the following fractions to percentages.

(a) $\frac{1}{4}$ ☐

(b) $\frac{1}{2}$ ☐

(c) $\frac{2}{5}$ ☐

(d) $\frac{3}{10}$ ☐

(e) $\frac{1}{8}$ ☐

(f) $\frac{3}{4}$ ☐

(g) $\frac{4}{5}$ ☐

(h) $\frac{9}{10}$ ☐

(i) 1 $\frac{1}{2}$ ☐

(j) $\frac{6}{8}$ ☐

Question 2

Convert the following decimals to percentages.

(a) 0.23 ☐

(b) 0.6 ☐

(c) 0.5 ☐

(d) 0.25 ☐

(e) 0.86 ☐

(f) 0.75 ☐

(g) 0.84 ☐

(h) 0.7 ☐

(i) 0.19 ☐

(j) 1.65 ☐

Practice Sheet N26

Question 1

Round the following numbers off to the nearest hundred.

(a) 3,685		(b) 45,891	
(c) 654		(d) 8,712	
(e) 165,732		(f) 516	
(g) 3,456,789		(h) 4,590	
(i) 5,812		(j) 6,091	

Question 2

Round the following numbers off to the nearest thousand.

(a) 16,542		(b) 235,219	
(c) 8,761		(d) 3,678,923	
(e) 22,148		(f) 1,010	

Question 3

Round the following numbers off to the nearest ten.

(a) 165		(b) 1,824	
(c) 47		(d) 6,784,352	
(e) 37,581		(f) 5,764	

Practice Sheet M1

Label all the circles, squares, rectangles and triangles you can find in this picture. It has been started for you.

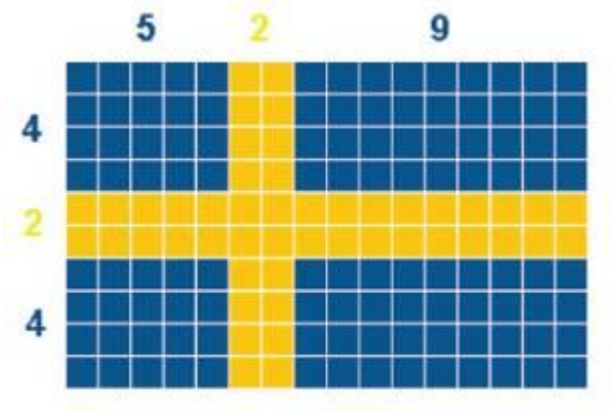
Practice Sheet M2

Identify as many circles, squares, rectangles and triangles from the crests as you can. It has been started for you.

Practice Sheet M3

Task 1

Draw the flag below to the dimensions your tutor will give you.



Practice Sheet M4

Task 1 Area of the floor

Find the length and the width of the floor of a room in your house or the classroom you are in.

Calculate the area of the floor.

Task 2 Area of the table

1. Find the length and width of the table you are using.

   Length: _____

   Width:_____

2. Calculate the area of the table, in square centimetres (cm^2).

   Area of table: _____

3. If the surface costs €2 per cm^2, how much does the total surface cost?

   Cost: _____

Practice Sheet M5

Task 1

A bed has a length of 2 metres and a width of 1.5 metres. What area will it take up in a room?

Task 2

A table has a length of 1 metre and a width of 0.5 metres. What area will it take up in a room?

Practice Sheet M6

Task 1

A couch has a length of 3 metres and a width of 1.5 metres. What area will it take up in a room?

Task 2

A table has a length of 2 metres and a width of 1 metre. What area will it take up in a room?

Practice Sheet M7

Task 1

A square table has a length of 1.5 metres. What area will it take up in a room?

Task 2

A round table has a radius of 1 metre. What area will it take up in a room?

Practice Sheet M8

Task 1

A bathroom has a length of 6m and a width of 4m. It is to be tiled at a cost of €9 per m^2.
How much will the tiles cost?

Task 2

A bedroom has a length of 7 metres and a width of 5 metres. How much would it cost to buy wooden flooring for this room if wooden flooring costs €9 per m^2?

Practice Sheet M9

Task 1

In previous lessons you drew furniture and a room to a given length and width and radius.

Look at those in the list that you used (below).

Use a scale of 1:20 for your drawings. That is, say that **1 cm represents 20 cm** in real life.

Using that scale, work out the **length** and **width** of the furniture and room in real life. Work out the **radius** if the piece of furniture is a circle.

Drawn length, width or radius	**Actual length, width or radius**
Coffee Table - Radius: 5 cm	
Shelving unit: Length: 10 cm Width: 6 cm	
Chair - Length: 9 cm Width: 9 cm	
Table - Length: 12 cm Width: 5 cm	
Couch - Length: 18 cm Width: 8 cm	
TV set - Length: 7 cm Width: 5 cm	
Rug - Radius: 6 cm	

Practice Sheet M10

Task 1

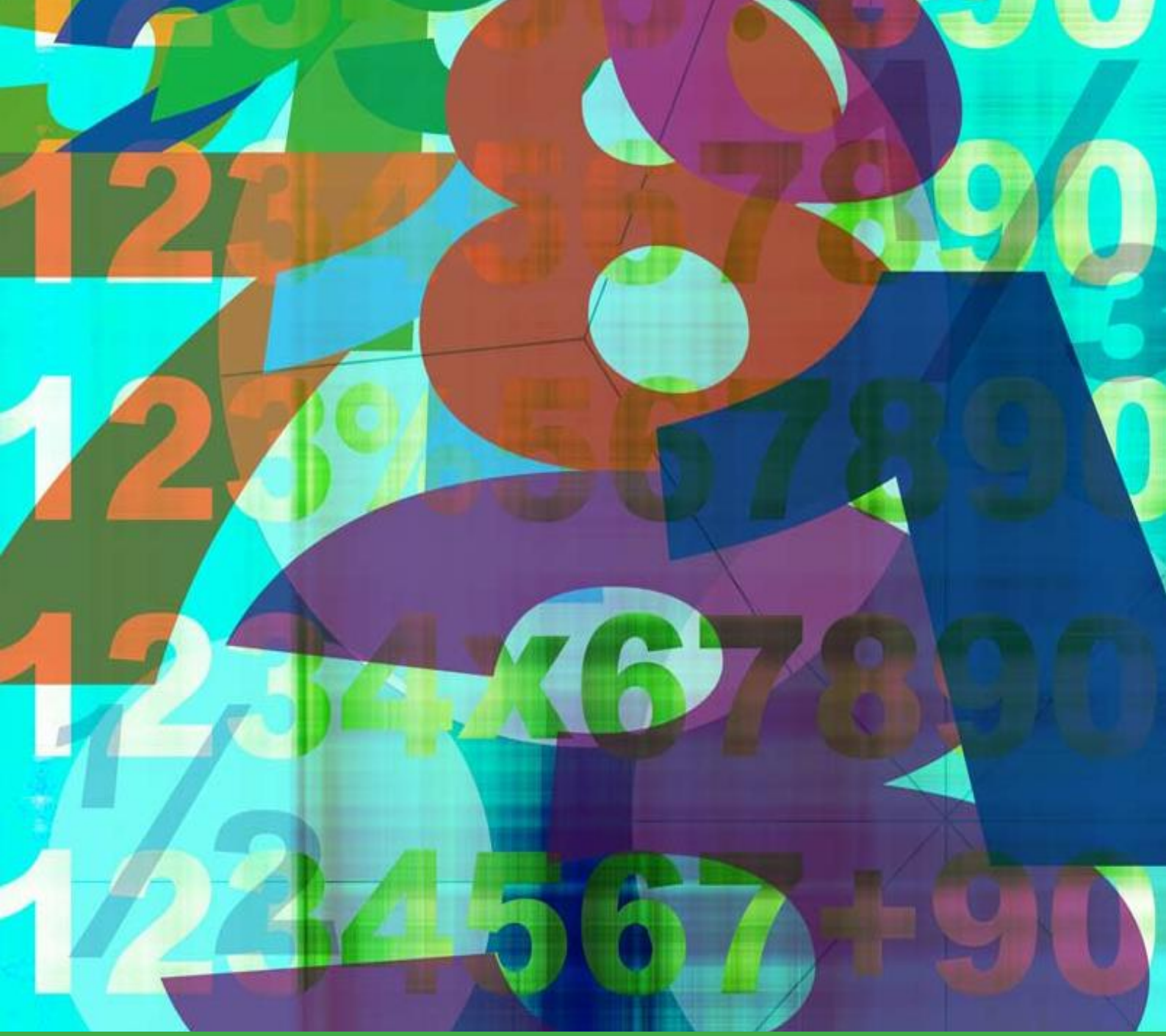
A yoghurt container is in the shape of a cylinder. It has a radius of 5 cm and a height of 8 cm. What volume of yoghurt can it hold?

Note: 1 cm^3 = 1 ml 1,000 ml = 1 Litre

Task 2

A cylindrical bottle has a radius of 4 cm and a height of 20 cm. What is the volume of this bottle? Will it be able to hold 1 litre of water?

Note: 1 cm^3 = 1 ml 1,000 ml = 1 Litre



Solution Sheets

Level 3: Application of Number
Units 1 & 2

Solution Sheet N1

Use your calculator to complete the following:

(a) 1.45 + 0.89 = 2.34

(b) $\frac{2}{7} \times \frac{1}{7}$ = $\frac{2}{49}$

(c) 2 .5– 0.156 = 2.344

(d) 19.875 ÷ 4 = 4.96875

(f) 15.78 ÷ 2= 7.89

(g) $\frac{1}{5}+\frac{2}{3}+\frac{1}{4}=$ $\frac{67}{60}$

(h) €4.80 ÷ 3= €1.60

(i) $\frac{2}{3}-\frac{4}{11}=$ $\frac{10}{33}$

(j) $\frac{5}{9} x \frac{2}{7}=$ $\frac{10}{63}$

(k) 1.75 ÷ 0.70 = 2.5

(l) $\frac{8}{11} \div \frac{7}{1}$ = $\frac{8}{77}$

(m) $\frac{5}{6}$ ÷ 0.54 = 0.45

(n) 15.78 ÷ $\frac{3}{7}=$ 36.82

(o) 11.57 – 15.87 = -4.3

Solution Sheet N2

Add the following natural numbers.
Show your workings on the sheet.

(a) 23 + 46	69	(b) 10 + 42	52
(c) 19 + 51	70	(d) 67 + 7	74
(e) 5 + 59	64	(f) 89 + 27	116
(g) 8 + 79	87	(h) 31 + 12	43
(i) 76 + 90	166	(j) 41 +11	52
(k) 7 + 10 + 61	78	(l) 8 +17 + 31	56
(m) 62 + 135 + 201	398	(n) 91 + 157 + 300	548

Solution Sheet N3

Subtract the following natural numbers.
Show your workings on the sheet.

(a) 40 - 10	**30**	(b) 35 - 9	**26**
(c) 45 - 32	**13**	(d) 81 - 9	**72**
(e) 90 - 53 - 2	**35**	(f) 36 - 6 - 3	**27**
(g) 68 - 15 - 44	**9**	(h) 88 - 47	**41**
(i) 36 - 9	**27**	(j) 75 - 19	**56**
(k) 88 - 10 - 6	**72**	(l) 54 - 42 - 12	**0**
(m) 34 - 5 - 18	**11**	(n) 543 - 41 - 79	**423**
(o) 140 - 32 - 53	**55**	(p) 716 - 467 - 20	**229**
(q) 1540 - 550	**990**	(r) 99 - 24 - 18	**57**
(s) 1437 - 153 - 22	**1262**	(t) 6700 - 355 - 27	**6318**

Solution Sheet N4

Add and subtract the following natural numbers.
Show your workings on the sheet.

(a) 44 + 10 - 39	**15**	(b) 35 - 9 + 13	**39**
(c) 66 - 33 + 85	**118**	(d) 81 - 9 + 45	**117**
(e) 90 - 54 + 99	**136**	(f) 56 + 5 - 17	**44**
(g) 68 - 15 - 44	**9**	(h) 65 - 10 + 41	**96**
(i) 37 + 13 - 20	**30**	(j) 85 - 19 + 15	**81**
(k) 14 - 10 + 68	**72**	(l) 12 + 24 - 12	**24**
(m) 98 - 34 + 25	**89**	(n) 456 - 321 + 66	**201**
(o) 89 - 75 + 3	**17**	(p) 54 + 83 - 29	**108**
(q) 1540 - 550	**990**	(r) 99 - 24 - 18	**57**
(s) 1502 - 222 + 76	**1556**	(t) 34 + 99 - 50	**83**

Solution Sheet N5

Are following are true or false? Tick the appropriate box.

(a) 6 ∑ Z	True	X	False	
(b) - 5 ∑ N	True		False	X
(c) - 4 ∑ Z and ∑ N	True		False	X
(d) 76 ∑ Z	True	X	False	
(e) -9 ∑ N and Z	True		False	X
(f) - 4 is greater than 2	True		False	X
(g) 3 is greater than -2	True	X	False	
(h) -5 < -3	True	X	False	
(i) -7 > -9	True	X	False	
(j) 0 is less than -1	True		False	X
(k) 4 > - 2	True	X	False	
(l) -10 > -8	True		False	X

Solution Sheet N6

Add and subtract the following integers.
Show your workings on the sheet.

(a) -35 +13	-22	(b) -9 + 45	36
(c) 45 - 8	37	(d) 8 - 15 +3	-4
(e) -3 + 17 - 6	8	(f) -98 - 7 - 32	-137
(g) 36 - 60	-24	(h)-9 - 75 + 99	15
(i) 21 - 60 + 43	4	(j) -15 + 27 + 9	21
(k) -74 - 92 + 5	-161	(l) 8 - 25 - 6	-23
(m) 1101 - 100	1001	(n) -7 - 700 + 321	-386
(o) -10 + 5 - 3	-8	(p) -987 + 550 - 34	-471
(q) 653 - 570 - 320	-237	(r) 1250 - 1300 + 5	-45
(s) -12 - 4	-16	(t) 0 - 31	-31

Solution Sheet N7

Multiply the following integers.
Show your workings on the sheet.

(a) 10 x -3	-30	(b) 3 x 20	60
(c) 24 x 3	72	(d) -7 x 4	-28
(e) -2 x -6	-12	(f)-13 x 20	-260
(g) 0 x 9 x 1	0	(h) -9 x -16	144
(i) 7 x 3 x 4	84	(j) -10 x 5	-50
(k) 82 x -4	-328	(l) 24 x 7	168
(m) -12 x -3	36		

Solution Sheet N8

Divide the following integers.
Show your workings on the sheet.

(a) 16 ÷ 4	4	(b) -20 ÷ 4	-6
(c) 49 ÷ - 7	-7	(d) 225 ÷ - 25	-9
(e) 45 ÷ - 3	-15	(f) $^{978}/_{2}$	489
(g) $-^{90}/_{5}$	-18	(h) $^{600}/_{-6}$	-100
(i) - 450 - 30	-1	(j) - 44 ÷ 11	-4
(k) $-^{75}/_{3}$	-25	(l) $^{63}/_{9}$	7
(m) - 69 ÷ 3	-23	(n) -3 ÷ 3	-1
(o) - 18 ÷ 0	0	(p) 56 ÷ 4	14
(q) $-^{25}/_{5}$	-5	(r) - 180 ÷ -6	30
(s) - 81 ÷ 9	-9	(t) $^{400}/_{9}$	-50

Solution Sheet N9

Express each of the following as a single integer.
Show your workings on the sheet.

(a) - 8 - 12 ÷ - 4 + 9

4

(b) (-5)(-8 + 12) + 39 ÷ - 13

-23

(c) - 7 - 4 + 6(5 - 8)

-29

(d) - (7 + 13) ÷ 5

-4

(e) - (8 x -6) ÷ 12 + 10

14

(f) 16 ÷ 8 - 2 x 4 + (5 - 6)

-7

(g) 45 ÷ 9 + 54 ÷ 9

11

(h) $\frac{9(11) - 3(5-2}{10}$

9

(i) $\frac{9(4) - 2(1)}{11}$

2

(j) -(2 +13) 5 + 15

12

Solution Sheet N10

1. Look at the numbers in the box below.

2.5	$^1/_3$	0	1	40.75
1 million	-37	0.25	$^1/_5$	900

Are they all real numbers? Tick the appropriate box.

Yes ☑ No ☐

2. This is a list of all the numbers from the box above. For each one, decide if it is a **whole number, negative number, fraction** or **decimal.** Write the correct answer in the box beside each number.

2.5	decimal
$^1/_3$	fraction
0	positive whole number
1	positive whole number
40.75	decimal
1 million	positive whole number
-37	negative number
0.25	decimal
$^1/_5$	fraction
900	positive whole number

Solution Sheet N11

Insert the correct symbol that should go between the two fractions in each case

>	is greater than
<	is less than
=	equals

Use fraction circles to help you.

(a) $\frac{1}{2} > \frac{1}{3}$

(b) $\frac{1}{4} > \frac{1}{5}$

(c) $\frac{3}{4} > \frac{1}{4}$

(d) $\frac{1}{2} > \frac{2}{5}$

(e) $\frac{1}{3} = \frac{2}{6}$

(f) $\frac{3}{4} < \frac{5}{6}$

(g) $\frac{4}{15} < \frac{2}{3}$

(h) $\frac{3}{8} < \frac{1}{3}$

(i) $\frac{5}{6} > \frac{3}{4}$

(j) $\frac{3}{12} = \frac{1}{4}$

Solution Sheet N12

Fill in the spaces to show the equivalent fractions.
Use fraction circles to help you where possible.

(a) $\frac{1}{3} = \frac{8}{24}$

(b) $\frac{1}{7} = \frac{3}{21}$

(c) $\frac{6}{9} = \frac{2}{3}$

(d) $\frac{2}{5} = \frac{4}{10}$

(e) $\frac{3}{4} = \frac{9}{12}$

(f) $\frac{5}{8} = \frac{10}{16}$

(g) $\frac{6}{10} = \frac{60}{100}$

(h) $\frac{1}{5} = \frac{2}{10}$

(i) $\frac{5}{6} = \frac{25}{30}$

(j) $\frac{6}{15} = \frac{2}{5}$

(k) $\frac{8}{10} = \frac{4}{5}$

(l) $\frac{7}{10} = \frac{70}{100}$

Solution Sheet N13

Write down the number that should replace the question marks.

(a) 3 wholes = 15 fifths

(b) 12 thirds = 4 whole things

(c) $4\frac{1}{3} = \frac{13}{3}$

(d) $\frac{9}{2} = 4\frac{1}{2}$

(e) $2\frac{3}{5} = \frac{13}{5}$

(f) $\frac{8}{3} = 2\frac{2}{3}$

(g) $\frac{26}{10} = 2\frac{3}{5}$

(h) $1 = \frac{10}{10}$

(i) $\frac{9}{5} = 1\frac{4}{5}$

(j) $5\frac{5}{7} = \frac{40}{7}$

(k) $\frac{13}{5} = 2\frac{3}{5}$

(l) $\frac{6}{2} = 3$

(m) $\frac{54}{10} = 5\frac{2}{5}$

(n) $\frac{14}{5} = 2\frac{4}{5}$

Solution Sheet N14

Add the following.
You can use fraction circles to help.

(a) $\frac{2}{8} + \frac{1}{8}$ $\frac{3}{8}$

(b) $\frac{2}{7} + \frac{1}{7}$ $\frac{3}{7}$

(c) $\frac{1}{3} + \frac{2}{3}$ $\frac{3}{3} = 1$

(d) $\frac{1}{4} + \frac{1}{4}$ $\frac{2}{4} = \frac{1}{2}$

(e) $\frac{1}{15} + \frac{4}{15} + \frac{5}{15}$ $\frac{10}{15} = \frac{2}{3}$

(f) $\frac{1}{8} + \frac{5}{8} + \frac{2}{8}$ $\frac{8}{8} = 1$

(g) $\frac{5}{8} + \frac{1}{8}$ $\frac{6}{8} = \frac{3}{4}$

(h) $\frac{4}{5} + \frac{2}{5}$ $\frac{6}{5} = 1\frac{1}{5}$

(i) $\frac{8}{15} + \frac{6}{15}$ $\frac{14}{15}$

(j) $\frac{5}{12} + \frac{2}{12}$ $\frac{7}{12}$

(k) $\frac{7}{8} + \frac{2}{8} + \frac{1}{8}$ $\frac{10}{8} = 1\frac{1}{4}$

(l) $\frac{3}{8} + \frac{2}{8} + \frac{5}{8}$ $\frac{10}{8} = 1\frac{1}{4}$

(m) $\frac{3}{5} + \frac{2}{5} + \frac{1}{5}$ $\frac{6}{5} = 1\frac{1}{5}$

(n) $\frac{6}{10} + \frac{2}{10} + \frac{2}{10}$ $\frac{10}{10} = 1$

Solution Sheet N15

Add and subtract the following.
You can use fraction circles to help.

(a) $\frac{1}{7} + \frac{1}{3}$ $\frac{10}{21}$

(b) $\frac{2}{5} + \frac{1}{6}$ $\frac{17}{30}$

(c) $\frac{2}{3} + \frac{1}{4}$ $\frac{5}{12}$

(d) $\frac{2}{9} - \frac{1}{3}$ $-\frac{1}{9}$

(e) $\frac{3}{4} - \frac{1}{6}$ $\frac{7}{12}$

(f) $\frac{5}{6} + \frac{1}{3}$ $\frac{7}{6} = 1\frac{1}{6}$

(g) $\frac{3}{10} - \frac{1}{5}$ $\frac{1}{10}$

(h) $\frac{5}{9} - \frac{1}{6} + \frac{1}{3}$ $\frac{13}{18}$

(i) $\frac{3}{10} - \frac{1}{4}$ $\frac{2}{40} = \frac{1}{20}$

(j) $\frac{1}{6} - \frac{1}{4}$ $-\frac{1}{12}$

(k) $\frac{1}{2} - \frac{1}{5}$ $\frac{3}{10}$

(l) $\frac{5}{9} - \frac{1}{4}$ $\frac{11}{36}$

Solution Sheet N16

Multiply the following fractions.
You can use fraction circles to help.

(a) $\frac{3}{4} \times \frac{1}{2}$ $\frac{3}{8}$

(b) $\frac{3}{9} \times \frac{3}{4}$

(c) $\frac{4}{5} \times \frac{8}{15}$ $\frac{32}{75}$

(d) $\frac{1}{2} \times 2$

(e) $\frac{3}{7} \times \frac{7}{3}$ $\frac{21}{21} = 1$

(f) $\frac{1}{2} \times 3\frac{1}{2}$

(g) $\frac{3}{4} \times \frac{1}{4}$ $\frac{1}{4}$

(h) $5\frac{3}{8} \times 1\frac{1}{3}$

(i) $\frac{3}{5} \times 30$ 18

(j) $4\frac{1}{2} \times 3$

(k) $3\frac{1}{2} \times 3\frac{1}{2}$ $12\frac{1}{4}$

(l) $\frac{1}{2} \times \frac{1}{5}$

Solution Sheet N17

Divide the following fractions.
You can use fraction circles to help where possible.

(a) $\frac{3}{4} \div \frac{1}{2}$ $\frac{6}{4} = 1\frac{1}{2}$

(b) $\frac{3}{9} \div \frac{3}{4}$ $\frac{12}{27}$

(c) $\frac{4}{5} \div \frac{8}{15}$ $\frac{60}{40} = 1\frac{1}{2}$

(d) $\frac{1}{2} \div 2$ $\frac{1}{4}$

(e) $\frac{3}{7} \div \frac{7}{3}$ $\frac{9}{49}$

(f) $\frac{1}{2} \div 3\frac{1}{2}$ $\frac{1}{7}$

(g) $\frac{3}{4} \div \frac{1}{4}$ 3

(h) $5\frac{3}{8} \div 1\frac{1}{3}$ $4\frac{1}{32}$

(i) $\frac{3}{5} \div 30$ $\frac{3}{150} = \frac{1}{50}$

(j) $4\frac{1}{2} \div 3$ $1\frac{1}{2}$

(k) $3\frac{1}{2} \div 3\frac{1}{2}$ 1

(l) $\frac{1}{2} \div \frac{1}{5}$ $\frac{5}{2} = 2\frac{1}{2}$

Solution Sheet N18

Question 1

Identify how many ones, tenths and hundredths are in each real number.

a)	3.56	3 ones	5 tenths	6 hundredths
b)	5.98	5 ones	9 tenths	8 hundredths
c)	6.01	6 ones	0 tenths	1 hundredths
d)	7.9	7 ones	9 tenths	0 hundredths
e)	9.82	9 ones	8 tenths	2 hundredths
f)	0.76	0 ones	7 tenths	6 hundredths
g)	1.09	1 ones	0 tenths	9 hundredths
h)	4.56	4 ones	5 tenths	6 hundredths
i)	10.89	10 ones	8 tenths	9 hundredths

Solution Sheet N19

Add the following numbers.

(a) 2.65 + 3.17	5.82	(b) 4.53 + 8.96	13.49
(c) 6.7 + 8.94	15.64	(d) 4.5	8.95 13.45
(e) 34.67 + 1.42	36.09	(f) 0.67 + 57.98	58.65
(g) 67.6 + 8.92	76.52	(h) 15.50 + 13.56	29.06
(i) 92.16 + 18.65	110.81	(j) 56.7 + 1.32 + 6.93	64.95
(k) 7.89 + 9.06 + 11.23	28.18	(l) 45.5 + 16 + 3.65	65.15
(m) 5.67 + 8.01 + 6.9	20.58	(n) 32.43 + 16.41 + 90.76	139.6
(o) 86.87 + 7.4 + 4.5	98.77	(p) 6.54 + 4.56 + 9.06	20.16
(q) 23.5 + 76.2 + 5.09	104.79	(r) 57.89 + 7.43 + 11.21 + 9.7	86.23
(s) 5.43 + 63.5 + 78.65 + 11.32	163.4	(t) 65.4 + 90.8 +7.65 + 33.45	197.3

Solution Sheet N20

Question 1

Subtract the following numbers.

(a) 4.78 - 3.65	1.13	(b) 2.47 - 1.32	1.15
(c) 8.94 - 7.6	1.34	(d) 7.43 - 0.87	6.56
(e) 6.55 - 2.49	4.06	(f) 67.89 - 56.73	11.16
(g) 78.45 - 8.92	69.53	(h) 15.50 - 13.56	1.94
(i) 145.1 - 45.67	99.43	(j) 78.01 - 8.45	69.56

Question 2

Evaluate the following.

(a) 18.69 + 5.78 - 11.43	13.04	(b) 34.67 - 23.55 + 14.63	25.75
(c) 5.67 + 8.01 - 6.9	6.78	(d) 18.95 -18.67 + 3.25	3.53
(e) 56.98 - 34.11 - 17.89	4.98	(f) 68.01 - 45.79 + 11.3	33.52
(g) 56.04 - 17.89 + 5.75	43.9	(h) 5.82 - 0.45 - 3.61	1.76
(i) 18.46 - 17.32 - 1.14	0	(j) 18.73 + 11.14 + 0.5 - 30	0.37

Solution Sheet N21

Question 1

Subtract the following numbers.

(a) 5.67 x 10	56.7	(b) 18.65 x 100	1865
(c) 3.15 x 2	6.3	(d) 4.56 x 6	27.36
(e) 5.18 x 4	20.72	(f) 6.5 x 100	650
(g) 4.09 x 5	20.45	(h) 11.32 x 3	33.96
(i) 32.04 x 2	64.08	(j) 18.09 x 10	180.9

Question 2

Evaluate the following:

(a) 18.69 + 5.78 x 10	76.49	(b) (16.5 x 10) + (3.1 x 4)	177.4
(c) 4.55 x 10 - 11.36	34.14	(d) 16.5 x 100 - 786.5	863.5
(e) (12.3 + 13.44) x 10	257.4	(f) 1.53 x 10 x 5	76.5
(g) (13.5 - 4.89) x 100	861	(h) 5.82 - 0.45 x 2	4.92
(i) 18.56 + 9.11 x 10	109.66	(j) (14.35 x 10) - (11.06 x 10)	32.9

Solution Sheet N22

Question 1

Evaluate the following numbers.

(a) 56.89 ÷ 10	5.689	(b) 18.65 ÷ 100	0.1865
(c) 0.6 ÷ 10	0.06	(d) 1.34 ÷ 1000	0.00134
(e) 16.84 ÷ 4	4.21	(f) 16.45 ÷ 5	3.29
(g) 44.37 ÷ 3	14.79	(h) 16.44 ÷ 6	2.74
(i) 32.04 ÷ 2	16.02	(j) 5.6 ÷ 10	0.56

Question 2

Evaluate the following:

(a) 9.65 - 3.05 ÷ 5	9.04	(b) 14.32 + 6.54 ÷ 2	17.59
(c) (4.86 x 10) ÷ 3	16.2	(d) (16.4÷4) + (11.2 ÷ 2)	9.7
(e) (36.45÷ 5) x 3	21.87	(f) (15.44 - 2.63) ÷ 3	4.27
(g) 2.45 x 2 ÷ 10 + 4.1	4.59	(h) 16.5 ÷ 5 x 10	33
(i) 9.8 - 3.4 ÷ 2	8.1	(j) (14.3 ÷ 10) - (0.06 x 10)	0.83

Solution Sheet N23

Question 1

Convert the following percentages to fractions in their simplest form.

(a) 50%	$\frac{1}{2}$	(b) 35%	$\frac{7}{20}$
(c) 25%	$\frac{1}{4}$	(d) 10%	$\frac{1}{10}$
(e) 5%	$\frac{1}{20}$	(f) 18%	$\frac{9}{50}$
(g) 12%	$\frac{3}{25}$	(h) 24%	$\frac{6}{25}$
(i) 100%	$\frac{1}{1}$	(j) 9%	$\frac{9}{100}$
(k) 65%	$\frac{13}{20}$	(l) 72%	$\frac{18}{25}$
(m) 150%	$1\frac{1}{2}$	(n) 98%	$\frac{49}{50}$
(o) 75%	$\frac{3}{4}$	(p) 67%	$\frac{67}{100}$
(q) 12.5%	$\frac{1}{8}$	(r) 37.5%	$\frac{3}{8}$
(s) 84%	$\frac{21}{25}$	(t) 32%	$\frac{8}{25}$

Solution Sheet N24

Question 1

Convert the following decimals to fractions in their simplest form.

(a) 0.6	$\frac{3}{5}$	(b) 0.5	$\frac{1}{2}$
(c) 0.3	$\frac{3}{10}$	(d) 0.45	$\frac{9}{20}$
(e) 0.75	$\frac{3}{4}$	(f) 0.68	$\frac{17}{25}$
(g) 0.02	$\frac{1}{50}$	(h) 0.56	$\frac{14}{25}$
(i) 0.26	$\frac{13}{50}$	(j) 0.13	$\frac{13}{100}$

Question 2

Convert the following decimals and percentages to fractions in their simplest form.

(a) 0.23	$\frac{23}{100}$	(b) 11%	$\frac{11}{100}$
(c) 38%	$\frac{19}{50}$	(d) 0.19	$\frac{19}{100}$
(e) 44%	$\frac{11}{25}$	(f) 0.56	$\frac{14}{25}$
(g) 10%	$\frac{1}{10}$	(h) 0.7	$\frac{7}{10}$
(i) 1.7	$\frac{17}{10}$	(j) 99%	$\frac{19}{100}$

Solution Sheet N25

Question 1
Convert the following fractions to percentages.

(a)	$\frac{1}{4}$	25%	(b)	$\frac{1}{2}$	50
(c)	$\frac{2}{5}$	40%	(d)	$\frac{3}{10}$	30%
(e)	$\frac{1}{8}$	12.5%	(f)	$\frac{3}{4}$	75%
(g)	$\frac{4}{5}$	80%	(h)	$\frac{9}{10}$	90%
(i) 1	$\frac{1}{2}$	150%	(j)	$\frac{6}{8}$	75%

Question 2
Convert the following decimals to percentages.

(a) 0.23	23%	(b) 0.6	60%
(c) 0.5	50%	(d) 0.25	25%
(e) 0.86	86%	(f) 0.75	75%
(g) 0.84	84%	(h) 0.7	70%
(i) 0.19	19%	(j) 1.65	165%

Solution Sheet N26

Question 1

Round the following numbers off to the nearest hundred.

(a) 3,685	3,700	(b) 45,891	45,900
(c) 654	700	(d) 8,712	8,700
(e) 165,732	16,700	(f) 516	500
(g) 3,456,789	3,456,800	(h) 4,590	4,600
(i) 5,812	5,800	(j) 6,091	6,100

Question 2

Round the following numbers off to the nearest thousand.

(a) 16,542	17,000	(b) 235,219	235,000
(c) 8,761	9,000	(d) 3,678,923	3,679,000
(e) 22,148	22,000	(f) 1,010	1,000

Question 3

Round the following numbers off to the nearest ten.

(a) 165	170	(b) 1,824	1,820
(c) 47	50	(d) 6,784,352	6,784,350
(e) 37,581	37,580	(f) 5,764	5,770

Solution Sheet M1

Your tutor will help you check that you have labelled all the **circles**, **squares**, **rectangles** and **triangles**.

Solution Sheet M2

The tutor will help you complete identification of the **circles, squares, rectangles** and **triangles**.

Solution Sheet M3

The tutor or one of the group will check that the flag is drawn to the dimensions given by the tutor.

The flag should be labelled and coloured appropriately.

Solution Sheet M4

Task 1

Find the length and the width of the floor of a room in your house or the classroom you are in. Calculate the area of the floor.

Solution:

- Find the length and the width in metres.
- Multiply the length by the width to find the area.

Task 2

Find the length and width of your desk and calculate the area of the desk. If the surface costs €2 per cm^2, how much does the desk surface cost?

Solution:

- Find the length and the width of the desk in centimetres.
- Multiply the length by the width to find the area.
- Multiply the area by €2 to find the total cost.

Solution Sheet M5

Task 1

A bed has a length of 2 metres and a width of 1.5 metres. What area will it take up in a room?

Solution:

Area = Length x width

Area = 2 x 1.5

Area = 3 m^2

It will take up an area of 3 m^2

Task 2

A table has a length of 1 metre and a width of 0.5 metres. What area will it take up in a room?

Solution:

Area = Length x Width

Area = 1 x 0.5

Area = 0.5 m^2

It will take up an area of 0.5 m^2

Solution Sheet M6

Task 1

A couch has a length of 3 metres and a width of 1.5 metres. What area will it take up in a room?

Solution: **4.5 m^2**

Task 2

A table has a length of 2 metres and a width of 1 metre. What area will it take up in a room?

Solution: **2m^2**

Solution Sheet M7

Task 1

A square table has a length of 1.5 metres. What area will it take up in a room?

Solution:

Area = Length x Width

As it is a square, the length and the width are the same (1.5 m)

Area = 1.5 x 1.5

Area = 2.25 m^2

It will take up an area of 2.25 m^2

Task 2

A table has a radius of 1 metre. What area will it take up in a room?

Solution:

Area =πr2

Area = π x (1)¸

Area = π x 1

Area = 3.14 x 1

Area = 3.14 m^2

It will take up an area of 3.14 m^2

Solution Sheet M8

Task 1

- A bathroom has a length of 6m and a width of 4m. It is to be tiled at a cost of €9 per m^2. How much will the tiles cost?

Solution:

- Area = Length x Width
- Area = 6 x 4 = 24 m^2
- Cost is €9 per m^2, so total cost = €9 x 24 = €216
- Total cost of the tiles is €216

Task 2

A bedroom has a length of 7 metres and a width of 5 metres. How much would it cost to buy wooden flooring for this room if wooden flooring costs €9 per m^2 ?

Solution:

- Find the area of the room first. Area = Length x Width
- Area = 7 x 5 = 35 m^2
- Total cost of wooden flooring = €9 x 35 = €315

Solution Sheet M9

Task 1

The model room you created in previous lessons, which included furniture and a room, was drawn to a certain scale. In this scale, 1 cm represented 20 cm in real life. Find the length and width of the furniture and room in real life, or the radius if the object is represented by a circle.

Drawn length, width or radius

Coffee Table - Radius: 5 cm
Shelving unit: Length: 10 cm Width: 6 cm
Chair - Length: 9 cm Width: 9 cm
Table - Length: 12 cm Width: 5 cm
Couch - Length: 18 cm Width: 8 cm
TV set - Length: 7 cm Width: 5 cm
Rug - Radius: 6 cm

Solution: Actual length, width or radius

Coffee Table - Radius: 100 cm or 1 m
Shelving unit: Length: 2 m Width: 1.2 m
Chair - Length: 1.8 m Width: 1.8 m
Table - Length: 2.4 m Width: 1 m
Couch - Length: 3.6 m Width: 1.6 m
TV set - Length: 1.4 m Width: 1 m
Rug - Radius: 1.2 m

Solution Sheet M10

Task 1

A yoghurt container is in the shape of a cylinder. It has a radius of 5 cm and a height of 8 cm. What volume of yoghurt can it hold?

Note: 1 cm^3 = 1 ml 1,000 ml = 1 Litre

Volume = $\pi r^2 h$

Volume = 3.14 x $(5)^2$ x 8

Volume = 3.14 x 25 x 8

Volume = 78.5 x 50

Volume = 3,925 cm^3 = 3,925 ml = 3.925 Litres

Task 2

A cylindrical bottle has a radius of 4 cm and a height of 20cm. What is the volume of this bottle? Will it be able to hold 1 litre of water?

Note: 1 cm^3 = 1 ml 1,000 ml = 1 Litre

Volume = $\pi r^2 h$

Volume = 3.14 x $(4)^2$ x 20

Volume = 3.14 x 16 x 20

Volume = 50.24 x 20

Volume = 1,004.8 cm^3 = 1,004.8 ml = 1.0048 Litres

Yes, it will be able to hold 1 litre of water.

Resources

Level 3: Application of Number

Fraction Cards

Temperature Cards

Fraction Circles

Fraction Snap	Fraction Snap
Fraction Snap	Fraction Snap
Fraction Snap	Fraction Snap

$\frac{1}{2}$	$\frac{2}{4}$
$\frac{3}{6}$	$\frac{4}{8}$
$\frac{5}{10}$	$\frac{6}{12}$

Fraction Snap	Fraction Snap
Fraction Snap	Fraction Snap
Fraction Snap	Fraction Snap

$\frac{7}{14}$	$\frac{8}{16}$
$\frac{1}{3}$	$\frac{2}{6}$
$\frac{3}{9}$	$\frac{4}{12}$

Fraction Snap	Fraction Snap
Fraction Snap	Fraction Snap
Fraction Snap	Fraction Snap

$\frac{5}{15}$	$\frac{1}{4}$
$\frac{2}{8}$	$\frac{3}{12}$
$\frac{4}{16}$	$\frac{1}{5}$

Fraction Snap	Fraction Snap
Fraction Snap	Fraction Snap
Fraction Snap	Fraction Snap

$\frac{2}{10}$	$\frac{3}{15}$
$\frac{1}{6}$	$\frac{3}{12}$
$\frac{1}{7}$	$\frac{2}{14}$

Temperature Cards

Temperature Cards

Temperature Cards

Temperature Cards

Temperature Cards

Temperature Cards

-20 °C	-19 °C
-18 °C	-17 °C
-16 °C	-15 °C

Temperature Cards	Temperature Cards
Temperature Cards	Temperature Cards
Temperature Cards	Temperature Cards

-14 °C	-13 °C
-12 °C	-11 °C
-10 °C	-9 °C

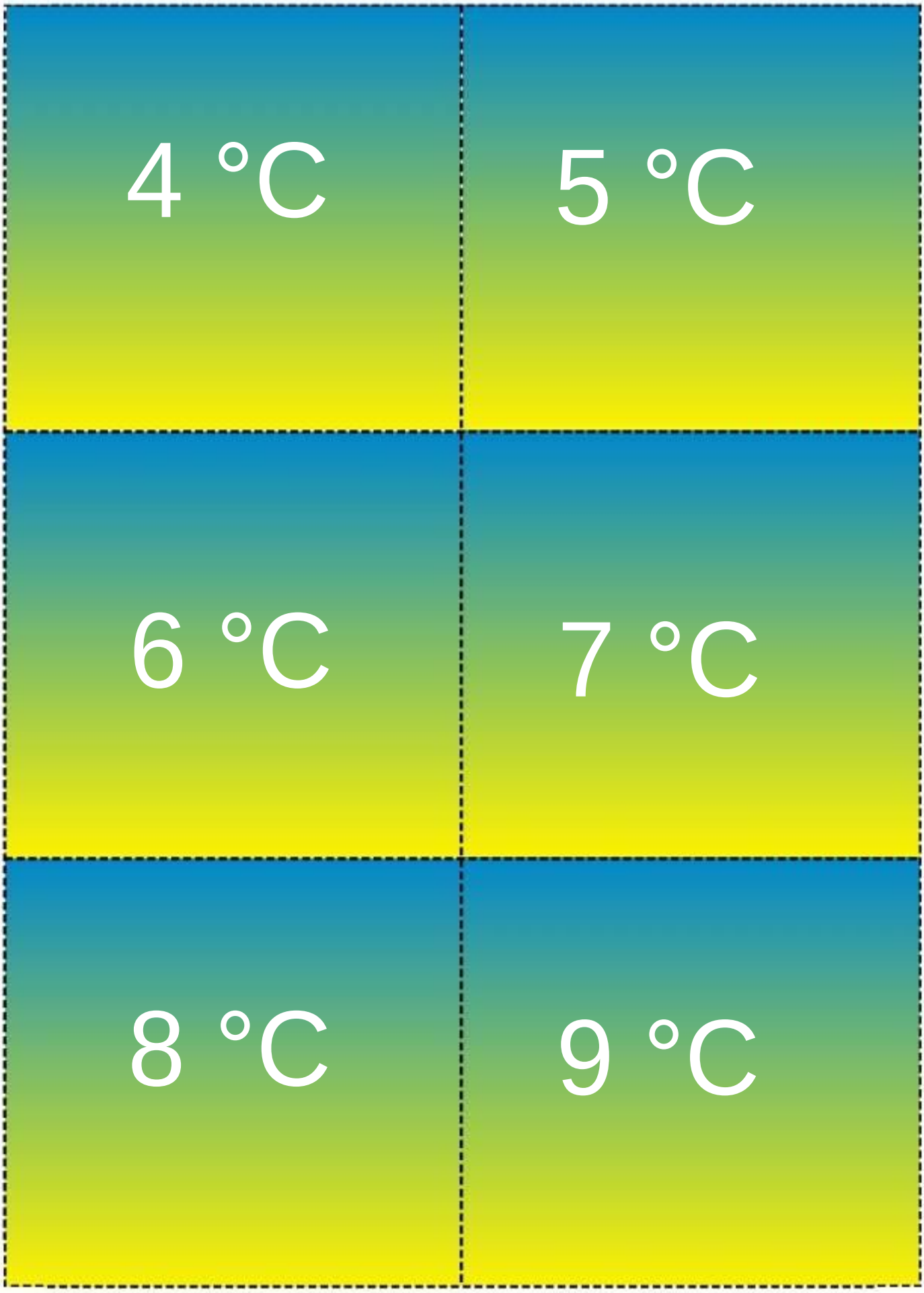
Temperature Cards	Temperature Cards
Temperature Cards	Temperature Cards
Temperature Cards	Temperature Cards


-8 °C
-7 °C
-6 °C
-5 °C
-4 °C
-3 °C

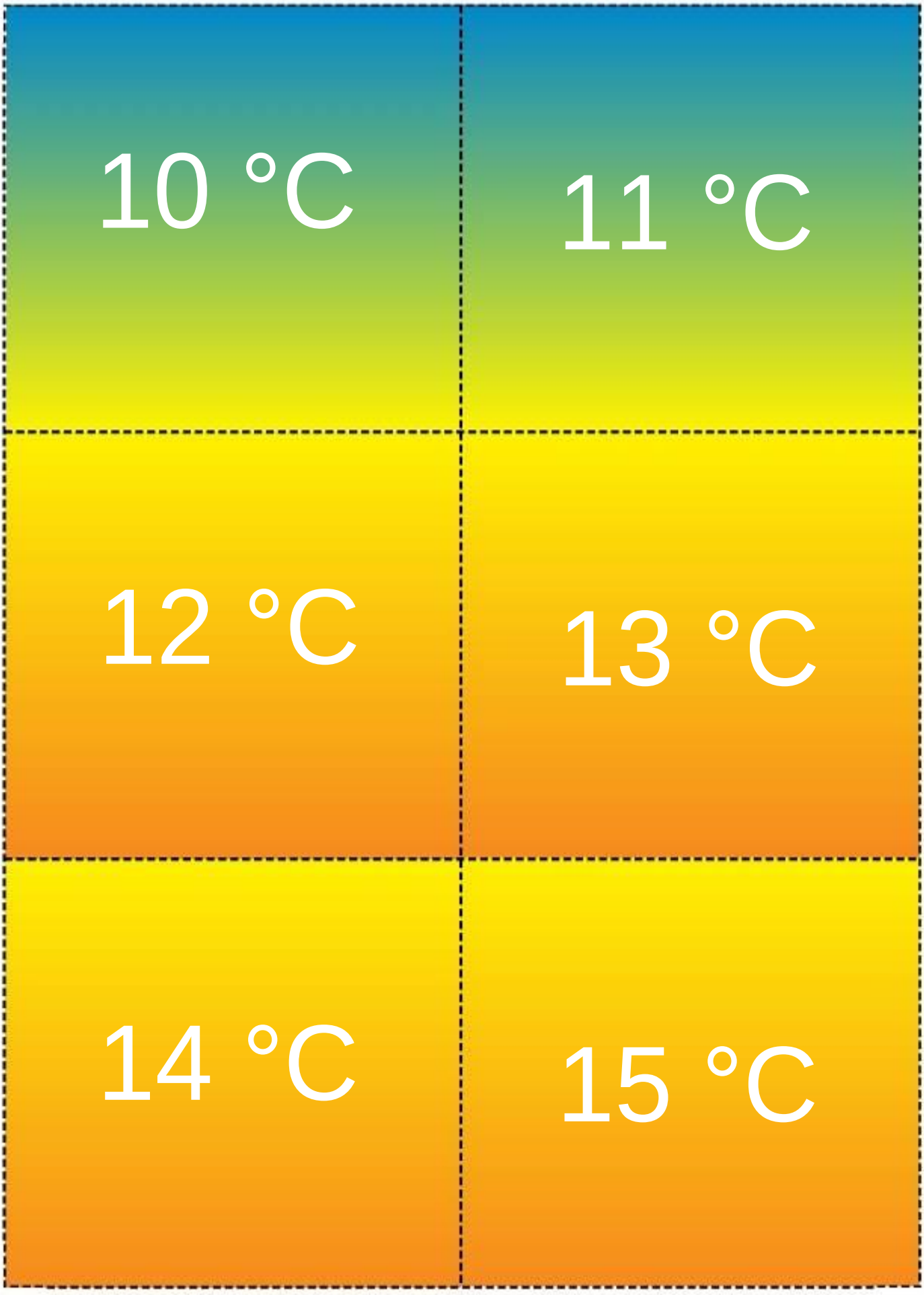
Temperature Cards	Temperature Cards
Temperature Cards	Temperature Cards
Temperature Cards	Temperature Cards

-2 °C	-1 °C
0 °C	1 °C
2 °C	3 °C

Temperature Cards	Temperature Cards
Temperature Cards	Temperature Cards
Temperature Cards	Temperature Cards


4 °C
5 °C
6 °C
7 °C
8 °C
9 °C

Temperature Cards	Temperature Cards
Temperature Cards	Temperature Cards
Temperature Cards	Temperature Cards


10 °C
11 °C
12 °C
13 °C
14 °C
15 °C

Temperature Cards	Temperature Cards
Temperature Cards	Temperature Cards
Temperature Cards	Temperature Cards

16 °C

17 °C

18 °C

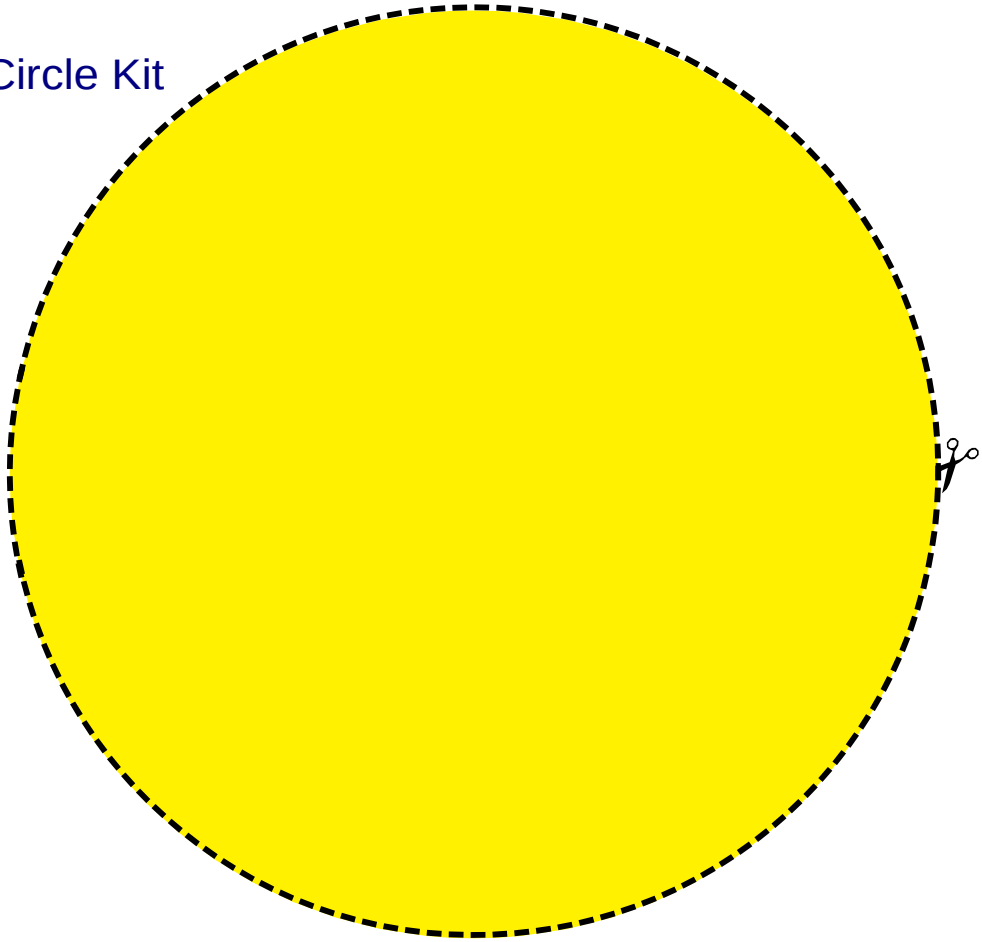
19 °C

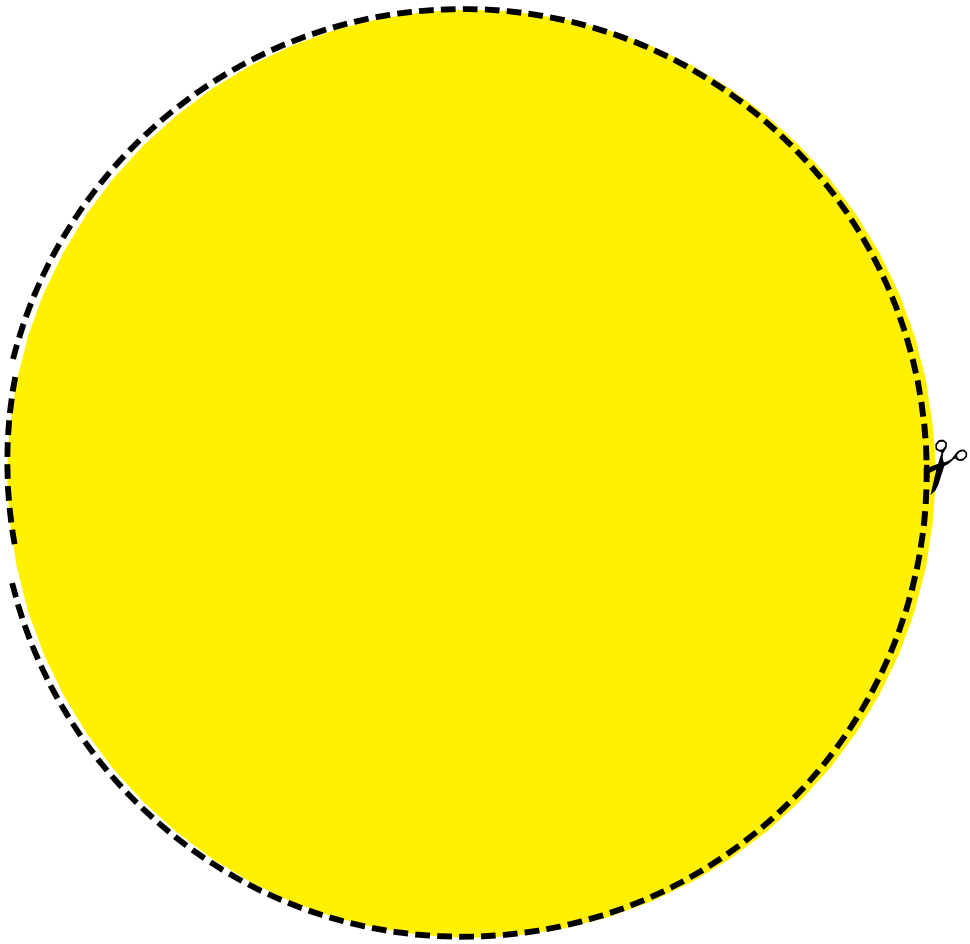
20 °C

21 °C

Fraction Circle Kit

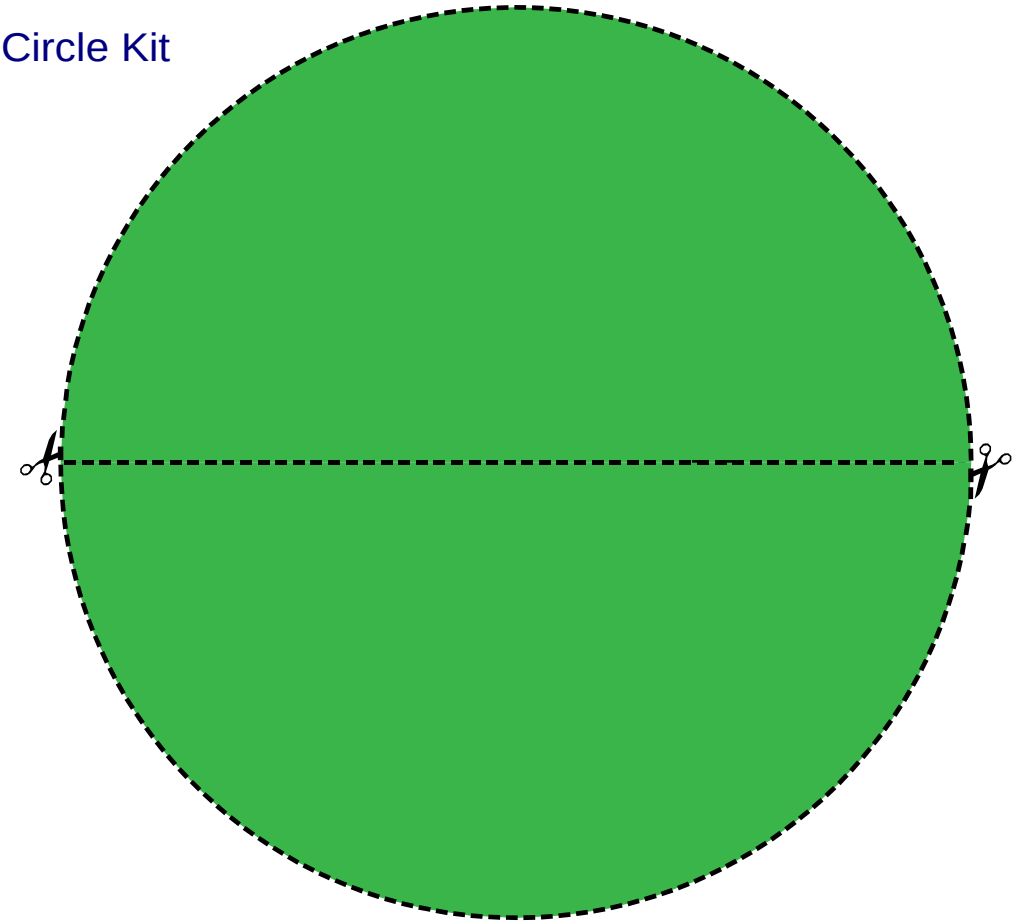
One Whole

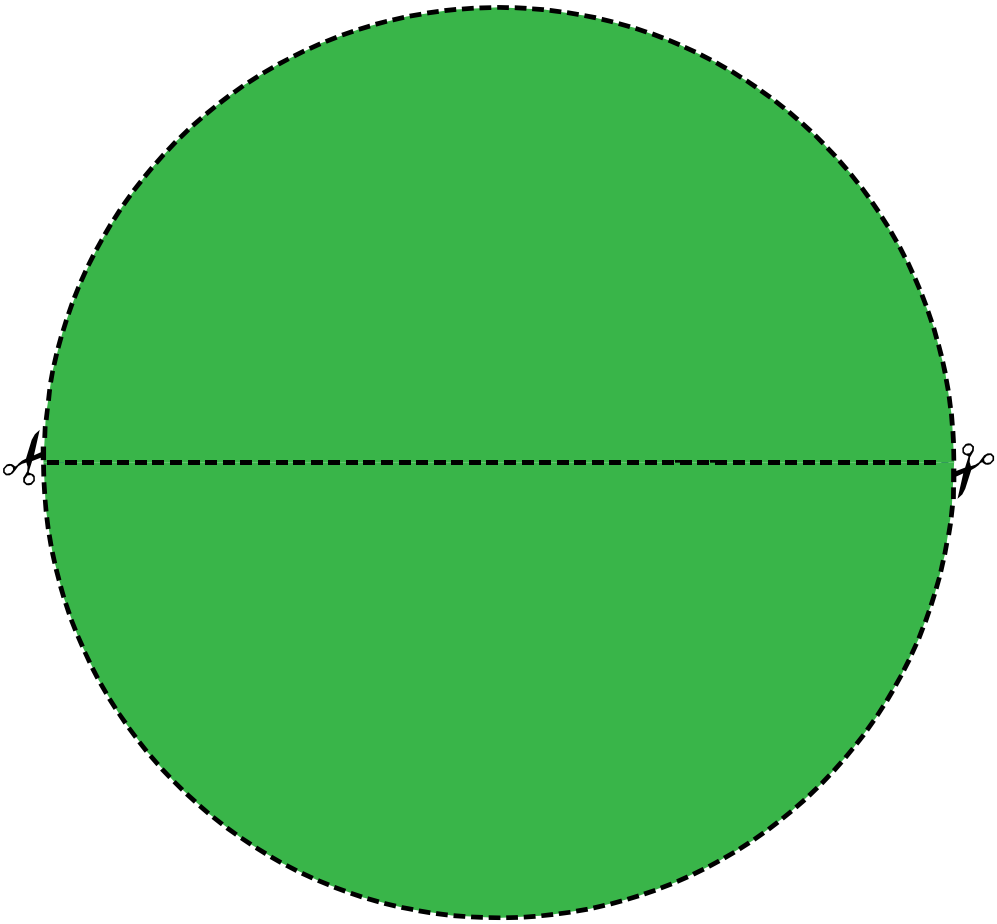




Fraction Circle Kit

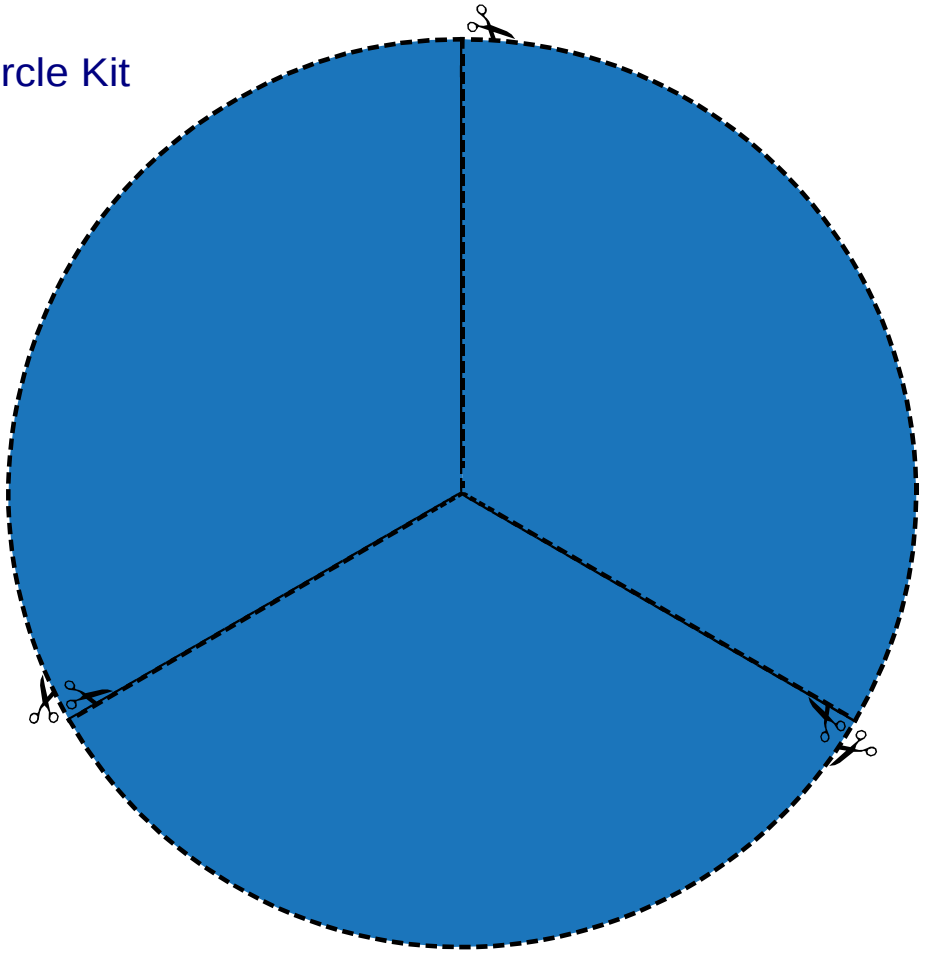
Halves

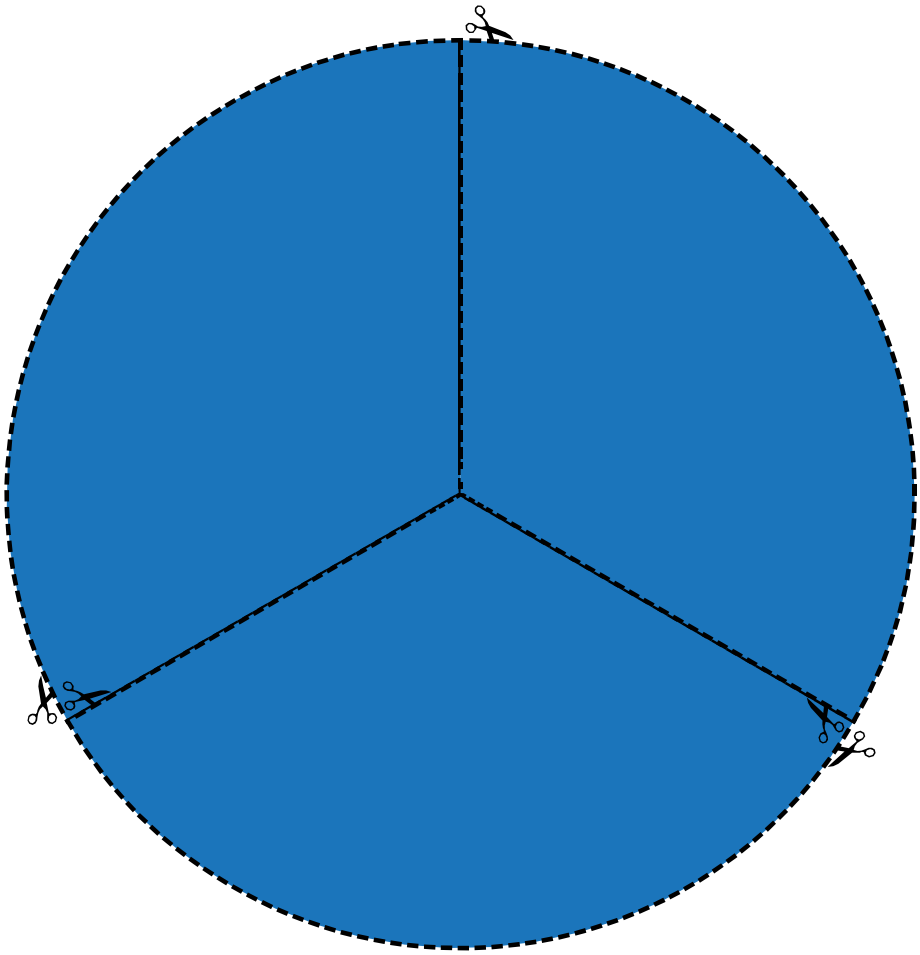




Fraction Circle Kit

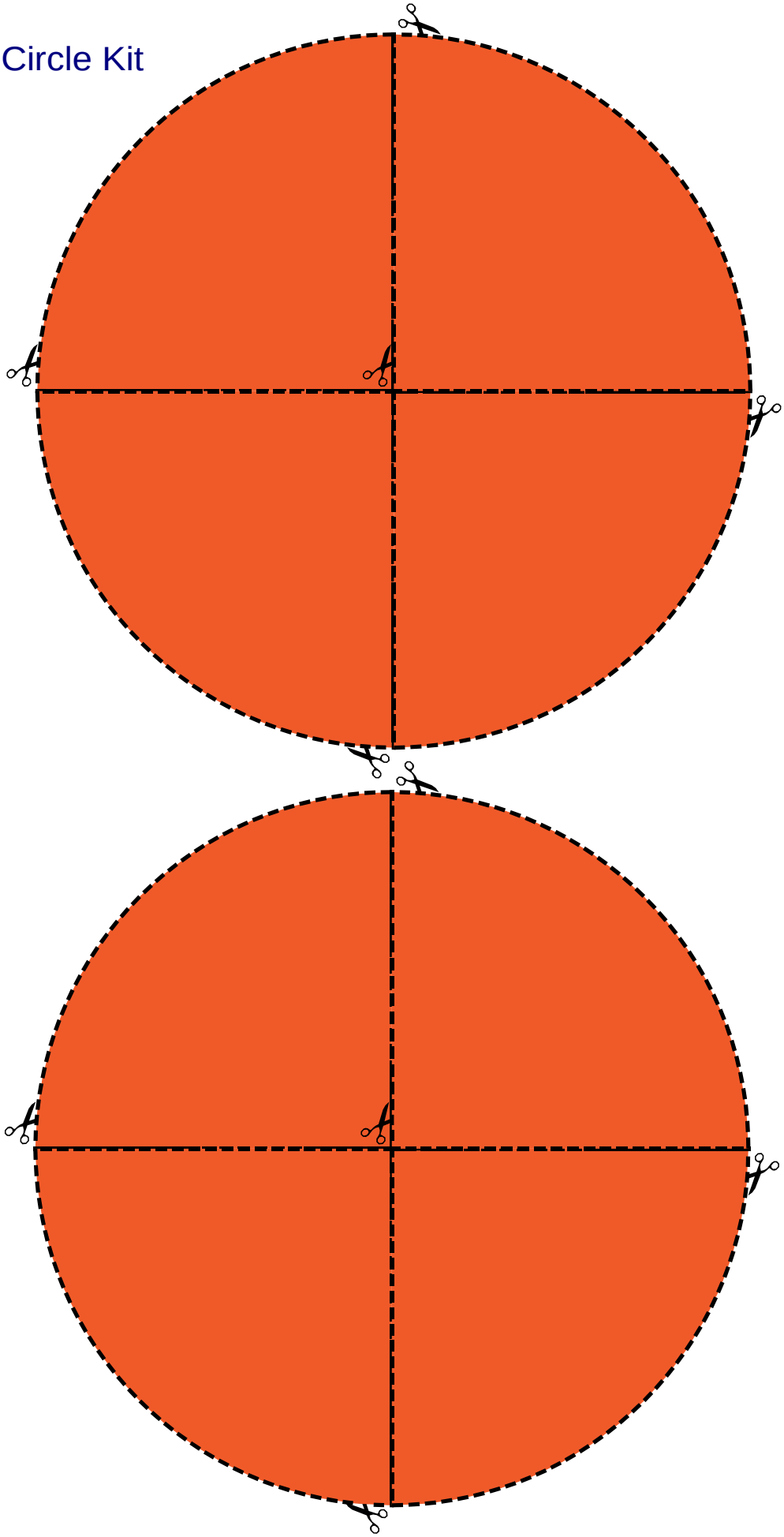
Thirds





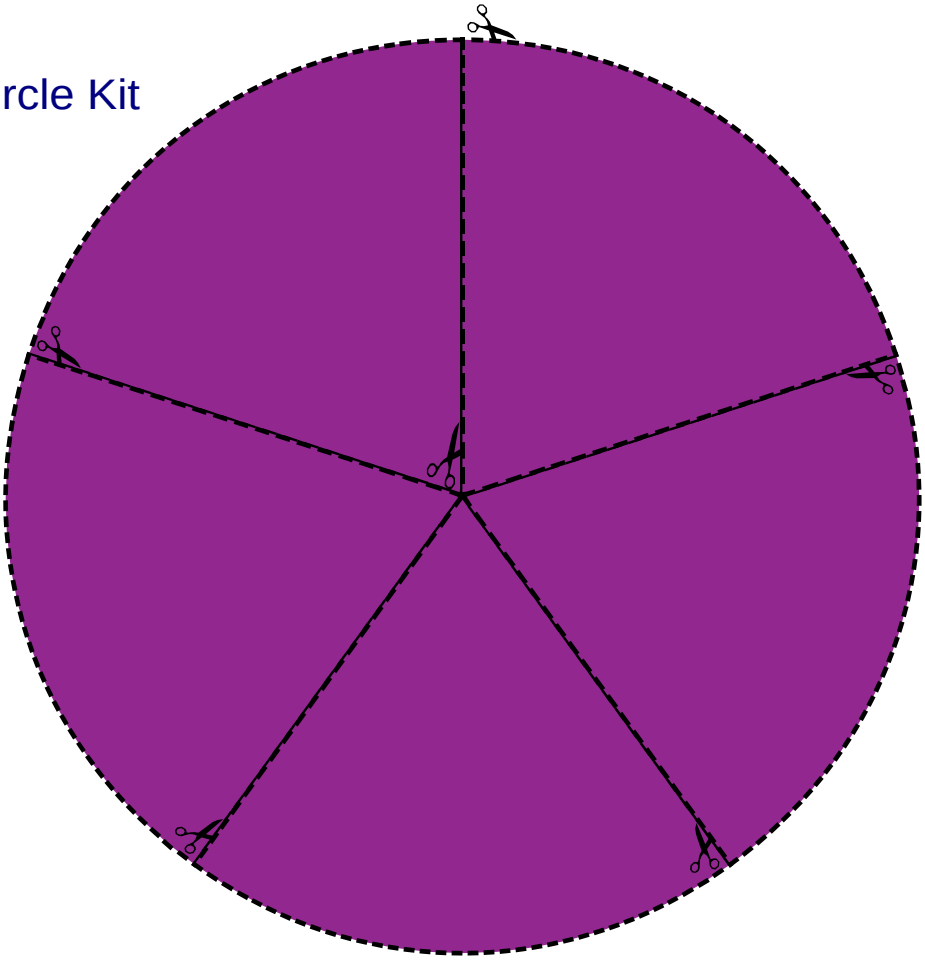
Fraction Circle Kit

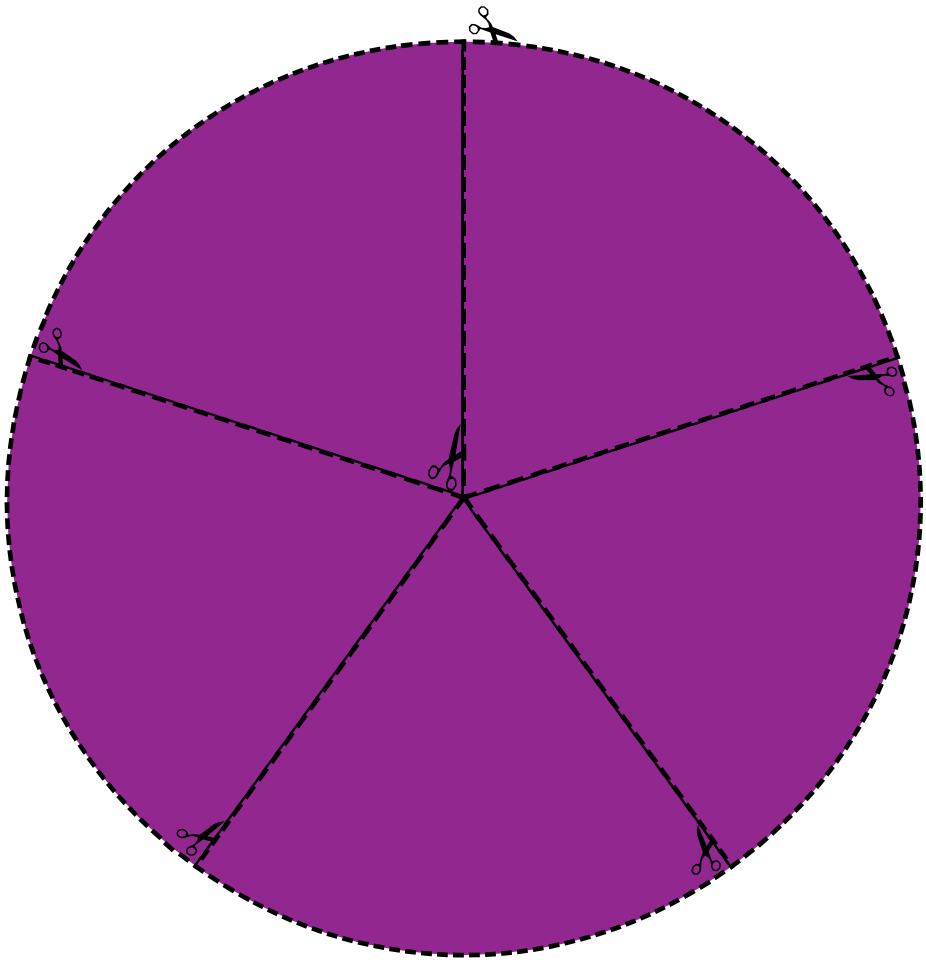
Quarters



Fraction Circle Kit

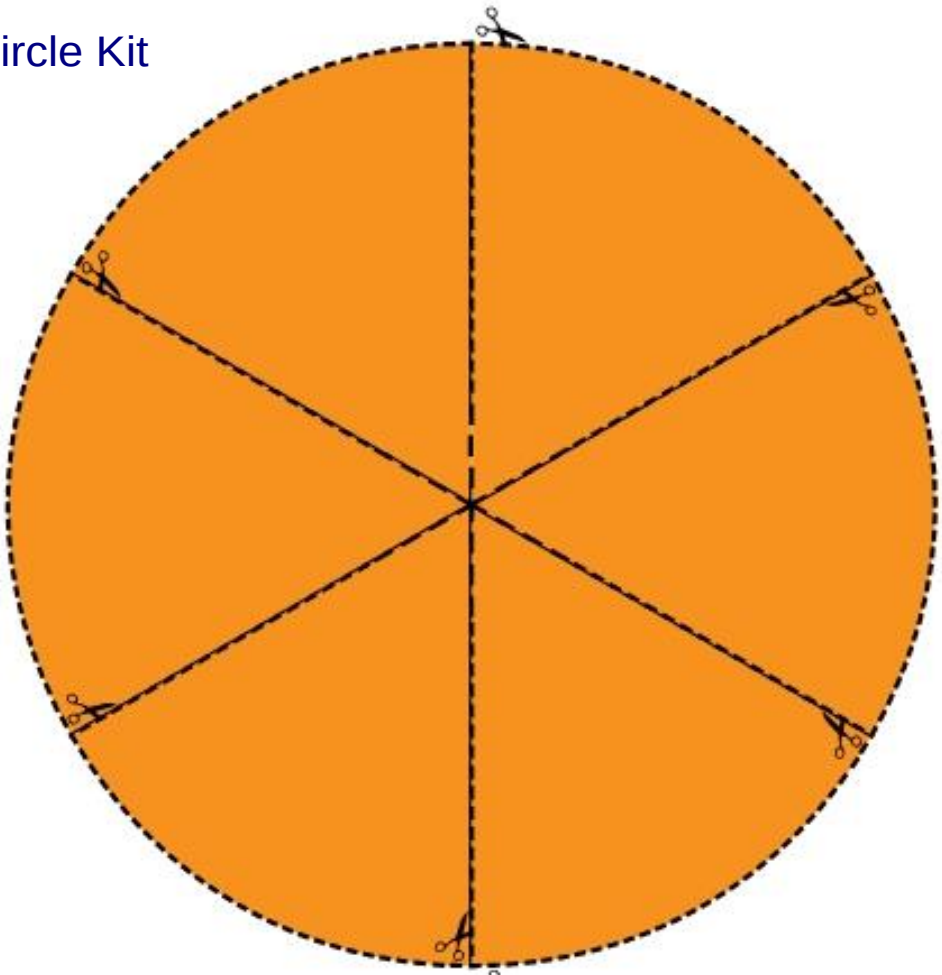
Fifths

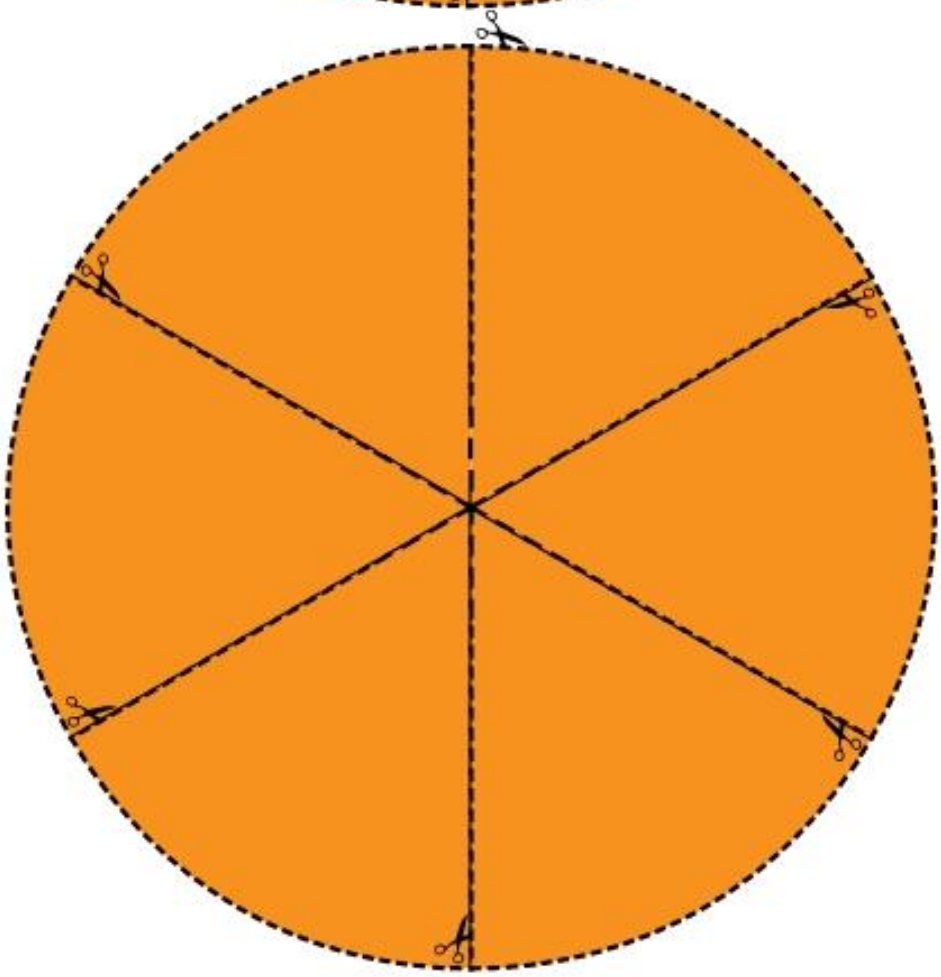




Fraction Circle Kit

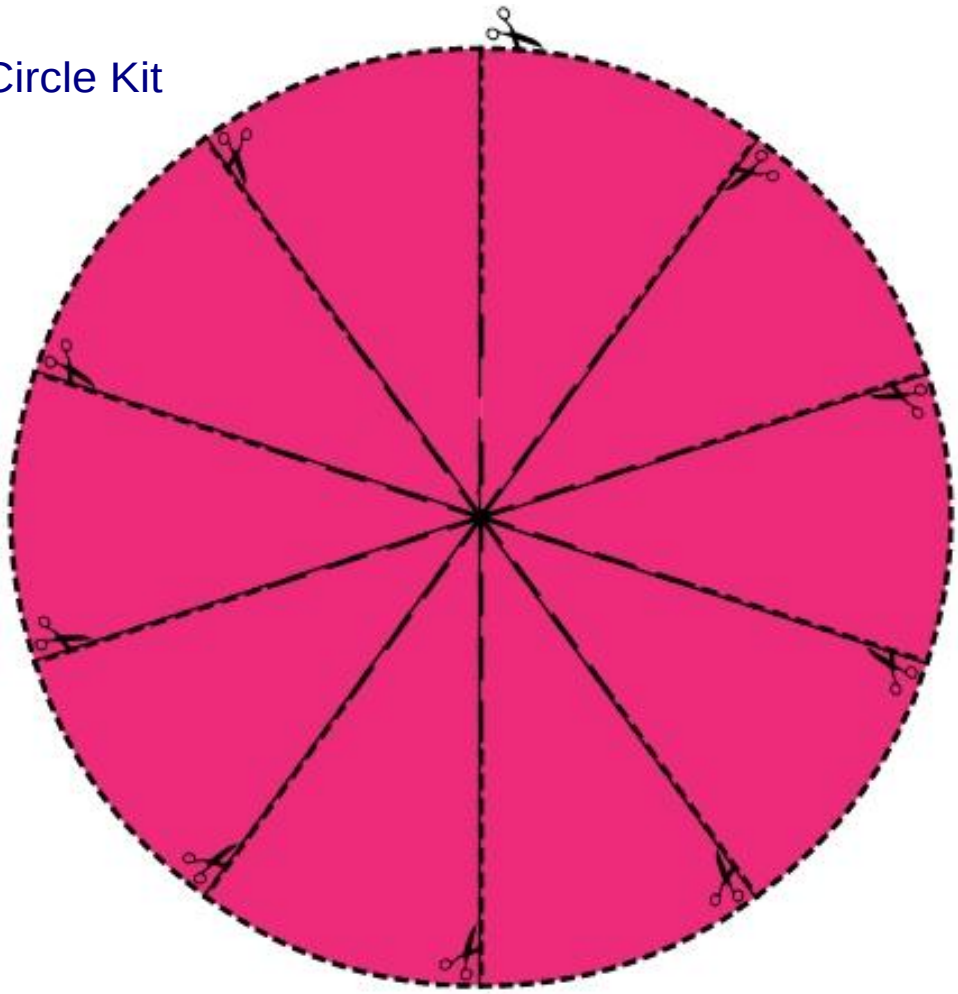
Sixths

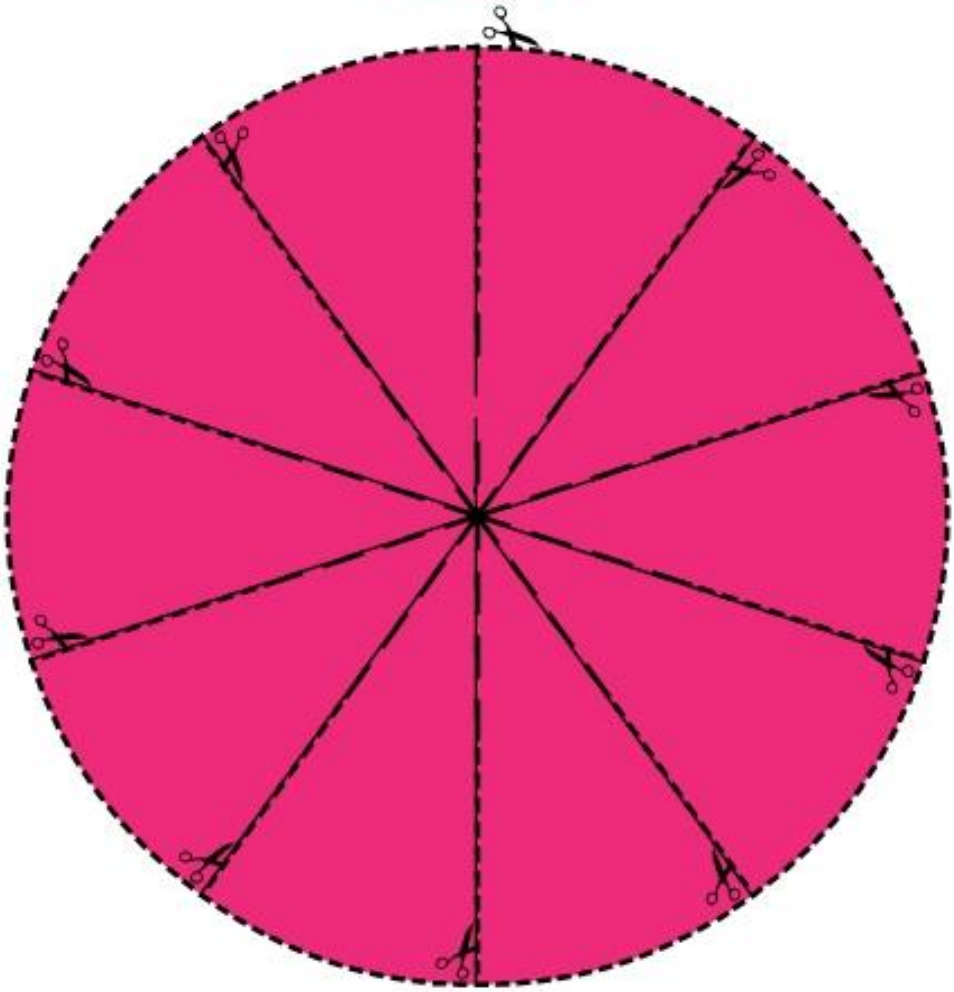




Fraction Circle Kit

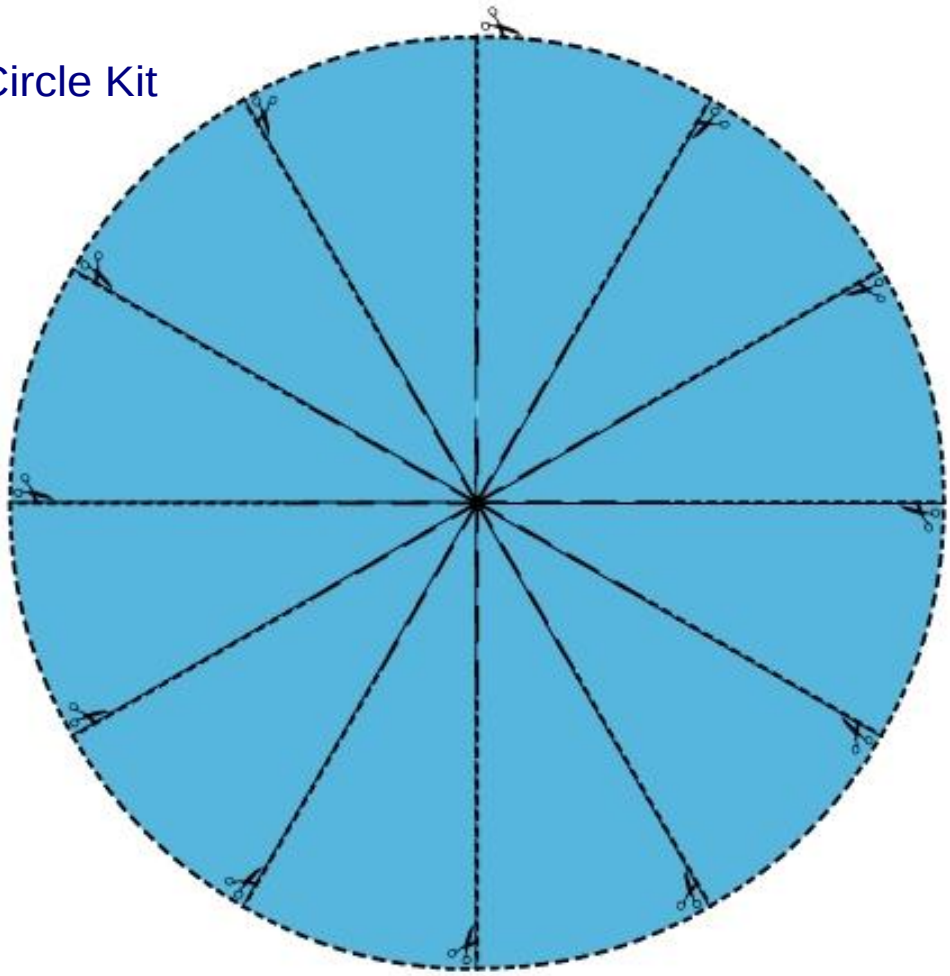
Tenths

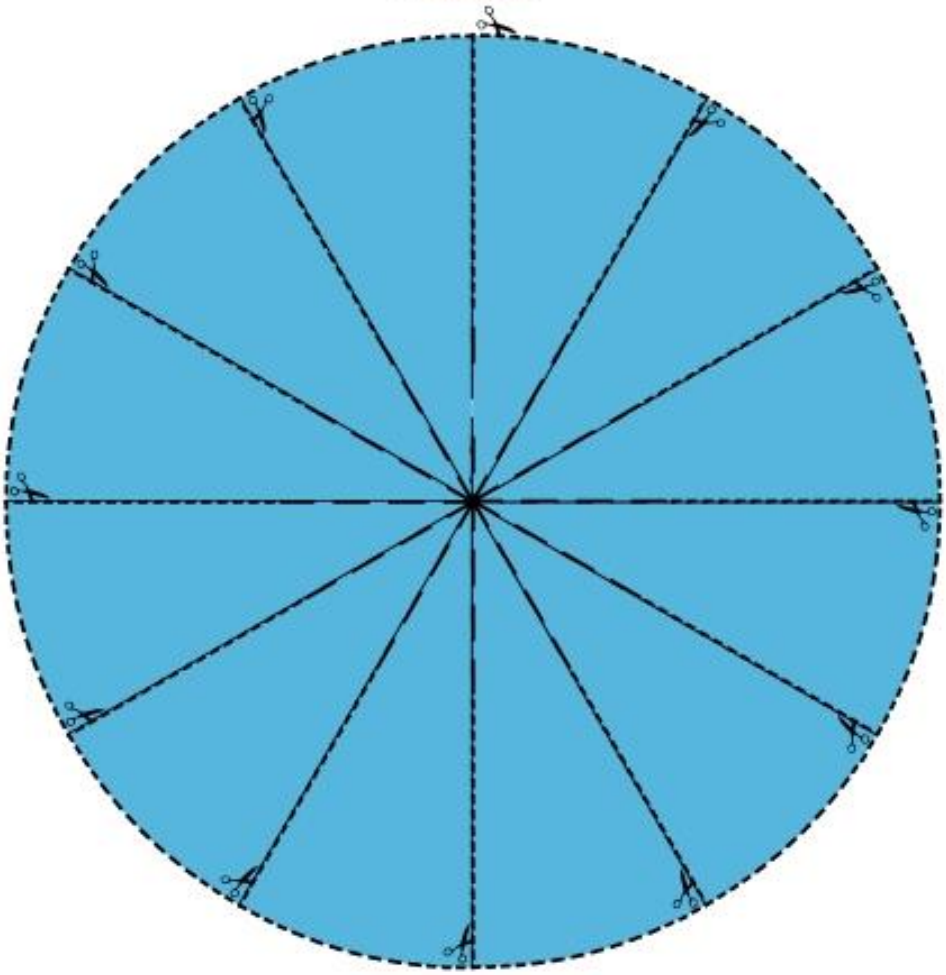




Fraction Circle Kit

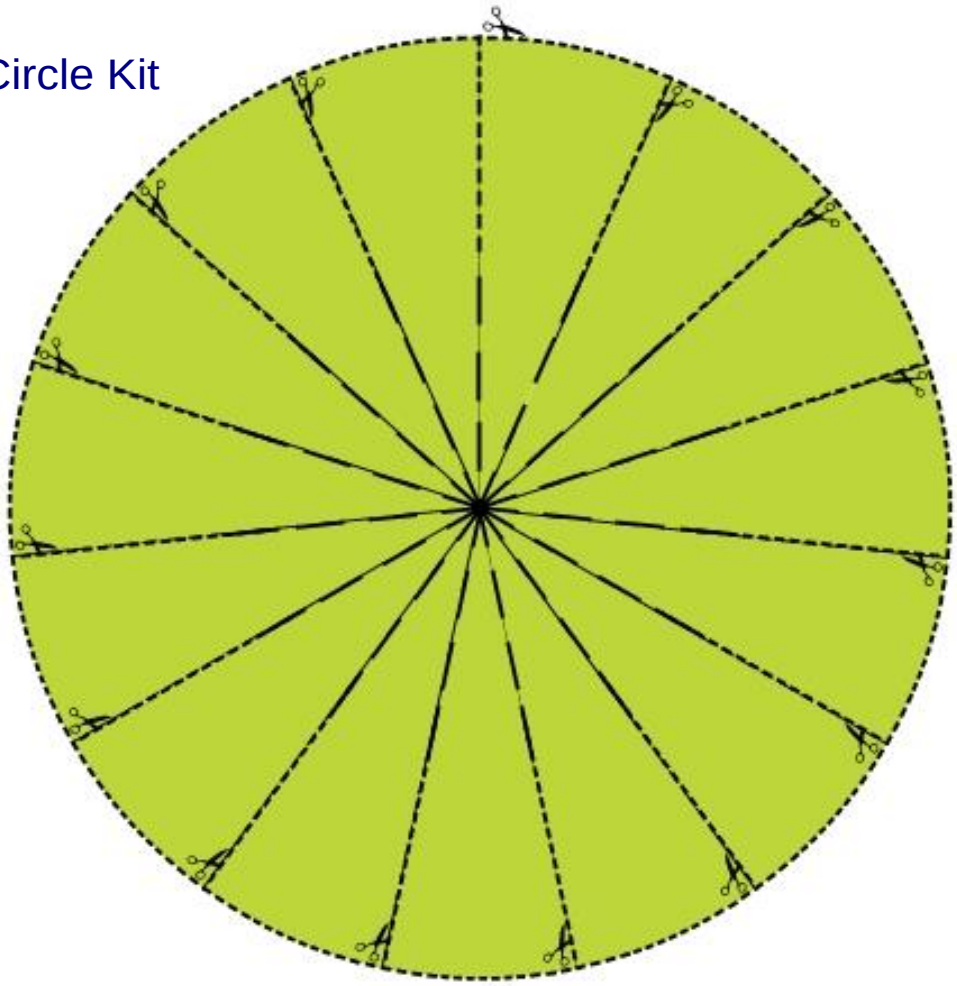
Twelfths

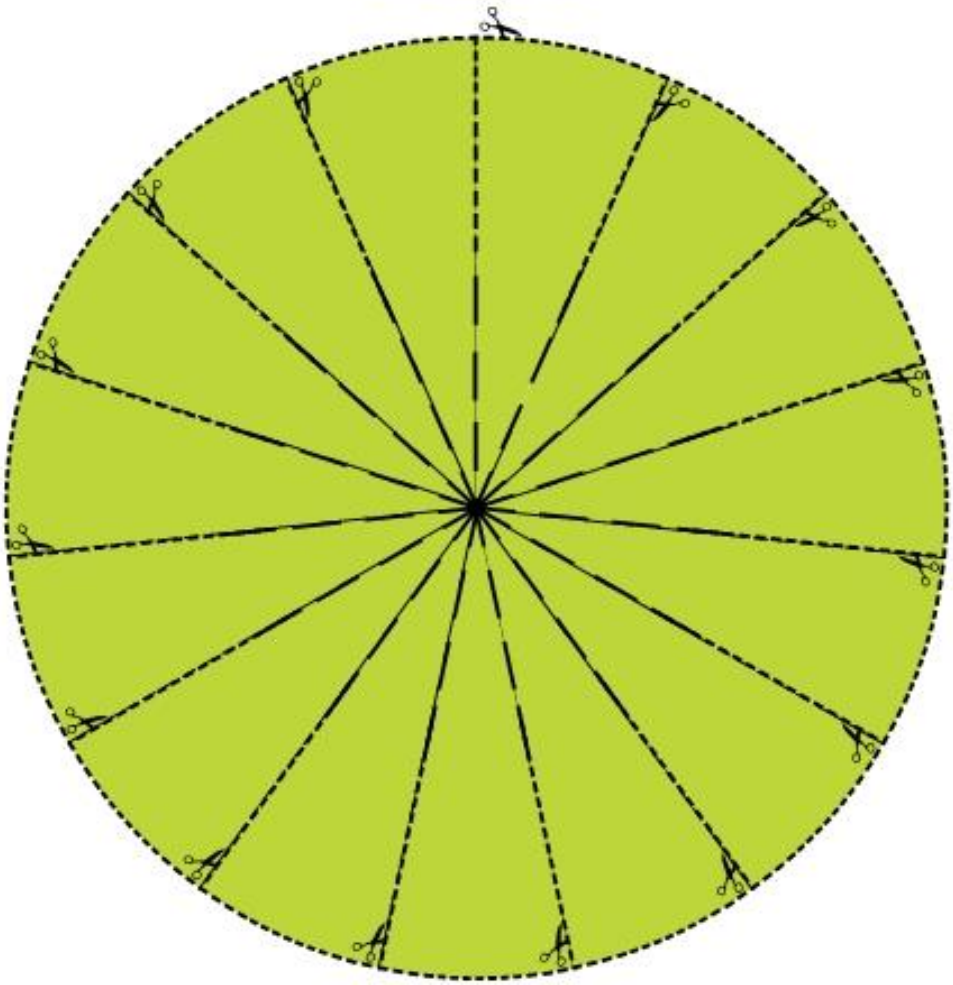




Fraction Circle Kit

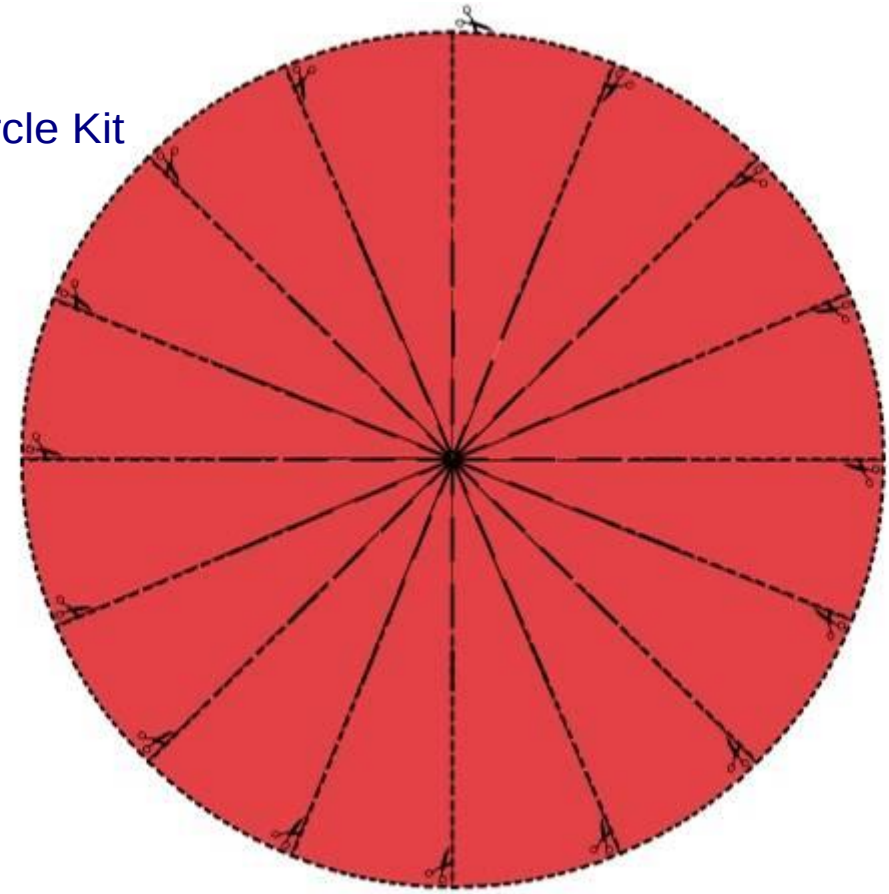
Fifteenths

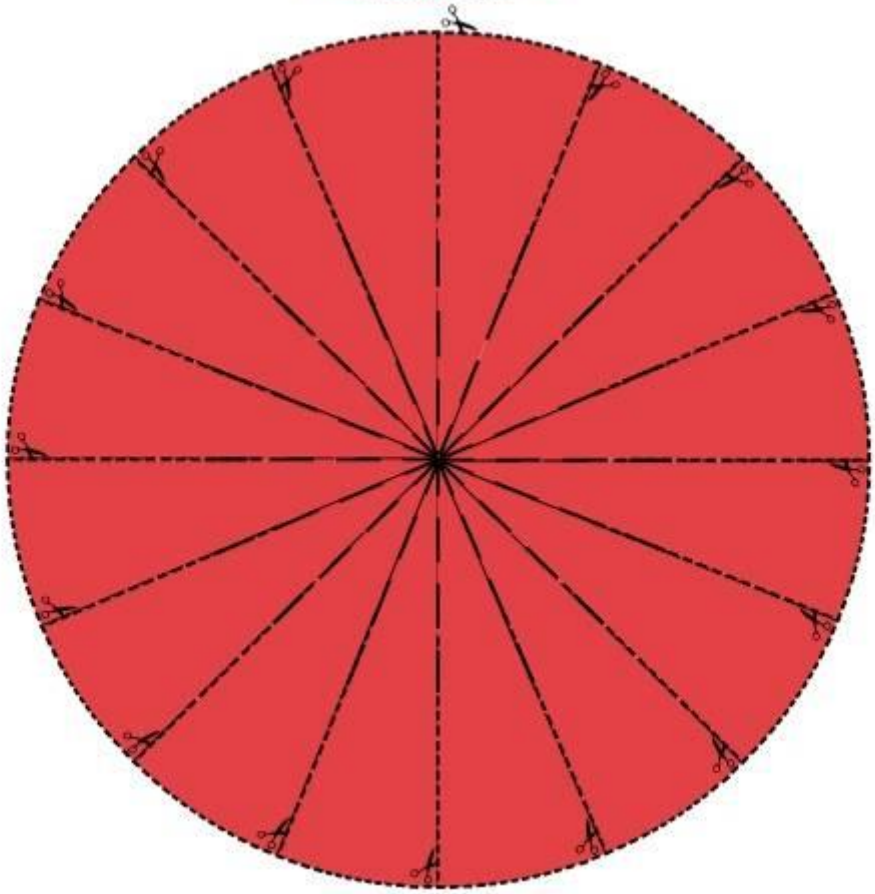




Fraction Circle Kit

Sixteenth





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Similar resources were developed to support CTC learners in working towards FETAC certification in Level 4 Mathematics.

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FAS:

John O'Neill

Louise MacAvin

Fionnuala Anderson

NALA:

Bláthnaid Ní Chinnéide

Fergus Dolan

John Stewart

Dr Terry Maguire (Institute of Technology, Tallaght)

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