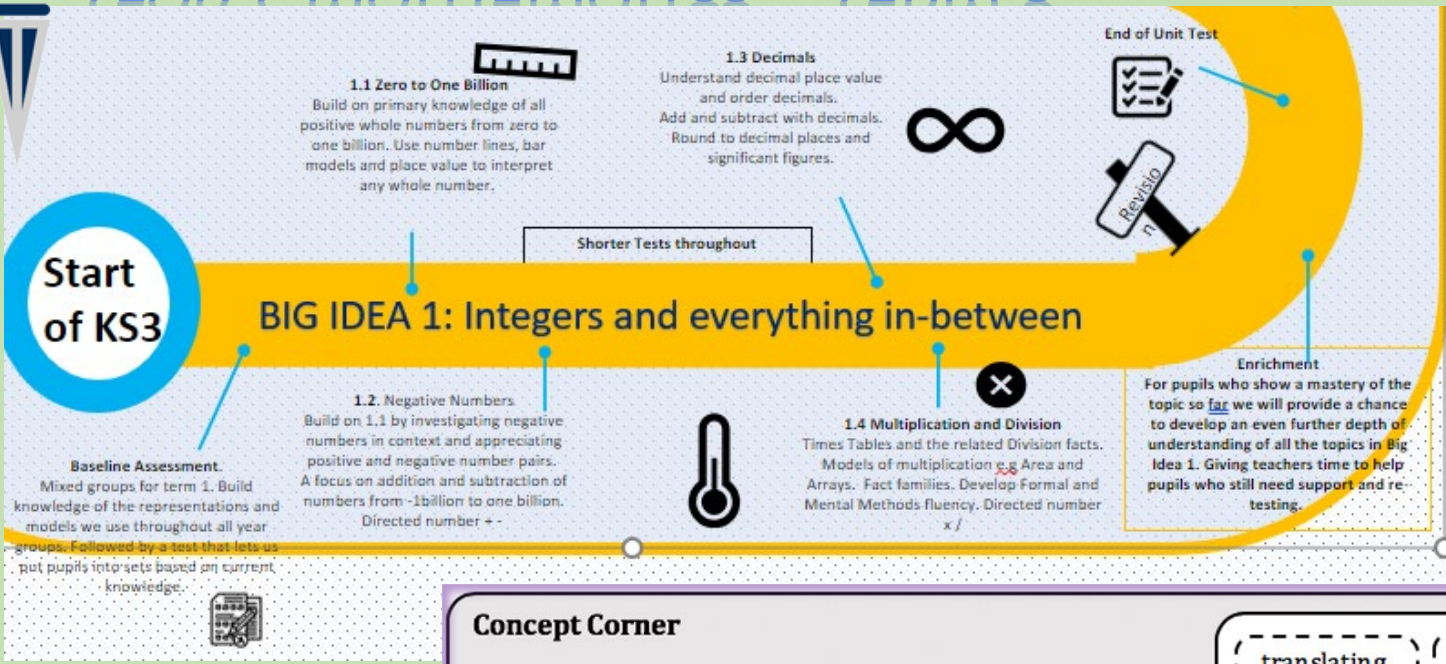# YEAR 7 MATHEMATICS – TERM 3

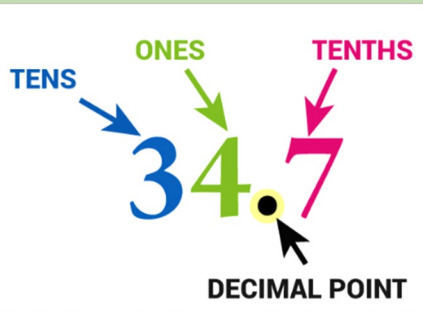## Multiplying

+ve x +ve = +ve

-ve x -ve = +ve

+ve x -ve = -ve

-ve x +ve = -ve

Dividing

+ve ÷ +ve = +ve

-ve ÷ -ve = +ve

+ve ÷ -ve = -ve

-ve ÷ +ve = -ve

Start of KS3

BIG IDEA 1: Integers and everything in-between

1.1 Zero to One Billion
Build on primary knowledge of all positive whole numbers from zero to one billion. Use number lines, bar models and place value to interpret any whole number.

1.3 Decimals
Understand decimal place value and order decimals. Add and subtract with decimals. Round to decimal places and significant figures.

End of Unit Test

Shorter Tests throughout

1.2. Negative Numbers
Build on 1.1 by investigating negative numbers in context and appreciating positive and negative number pairs. A focus on addition and subtraction of numbers from -1billion to one billion. Directed number + -

1.4 Multiplication and Division
Times Tables and the related Division facts. Models of multiplication e.g Area and Arrays. Fact families. Develop Formal and Mental Methods fluency. Directed number x /

Enrichment
For pupils who show a mastery of the topic so far we will provide a chance to develop an even further depth of understanding of all the topics in Big Idea 1. Giving teachers time to help pupils who still need support and re-testing.

Baseline Assessment.
Mixed groups for term 1. Build knowledge of the representations and models we use throughout all year groups. Followed by a test that lets us put pupils into sets based on current knowledge.
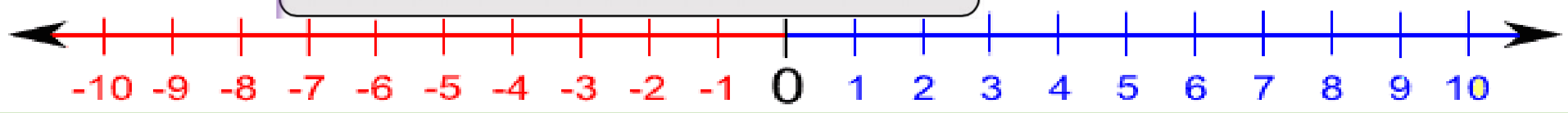
Concept Corner

We can think of addition as _____ a point on the number line.

Here we translated a point that started at _____ . It moved five spaces to the right so it finished at ____ .

This number line shows us that $(-3) +$ ____ $=$ ____ .

translating — 3
-3 5 — fixing
2 2 — turning

TENS ONES . TENTHS

3 4 . 7

DECIMAL POINT

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

Question 1:   Work out the answers to each of the following

(a) 2 – 3   (b) 3 – 5   (c) 4 – 9   (d) 1 – 5

(e) 5 – 7   (f) 6 – 7   (g) 8 – 11   (h) 2 – 10

(i) –2 + 4   (j) –3 + 9   (k) –7 + 10   (l) –6 + 1

(m) –5 + 8   (n) –9 + 7   (o) –20 + 11   (p) –12 + 18

(q) –3 – 2   (r) –4 – 1   (s) –6 – 3   (t) –1 – 5

(u) –7 – 3   (v) –8 – 5   (w) –9 – 12   (x) –15 – 13

Question 2:   Work out the answers to each of the following

(a) 3 + 5 – 4   (b) 2 + 1 – 6   (c) 5 – 8 – 1   (d) 7 – 10 + 1

(e) 8 + 3 – 15   (f) 5 – 6 – 4   (g) 1 – 7 – 4   (h) –3 + 6 + 1

(i) –8 + 2 + 3   (j) –10 + 4 – 6   (k) –9 – 3 – 1   (l) –2 – 7 + 4

(m) –20 + 11 – 6   (n) –5 + 14 – 8   (o) –13 – 4 + 6   (p) –30 – 80 + 40

Apply

Question 1:   At midnight, the temperature in Belfast was –2°C
               At 9am, the temperature was 5°C

               By how many degrees did the temperature rise?
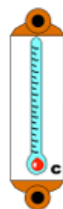
Question 2:   Mr Jones has –£50 in his bank account.
               If he pay £70 into the bank, how much will he now have in his account?

Question 1:   Work out the answers to the following additions

(a) 4.5 + 2.3   (b) 8.4 + 1.7   (c) 0.7 + 0.5   (d) 2.8 + 10.3

(e) 13.4 + 28.9   (f) 206.2 + 72.8 (g) 6.4 + 15.9   (h) 0.5 + 0.8 + 0.1

(i) 9.7 + 1.4 + 1.3   (j) 16.8 + 3.9 + 102.2 + 87.4

Question 2:   Work out the answers to the following subtractions

(a)   7.7 – 1.5   (b) 8.5 – 4.1   (c) 19.7 – 18.6   (d) 26.2 – 5.2

(e)   54.5 – 23.1   (f) 80.4 – 10.3   (g) 16.6 – 9.2   (h) 85.7 – 50.4

(i)   7.3 – 4   (j) 8.6 – 2   (k) 24.9 – 6   (l) 15.1 – 9

(m) 7 – 1.3   (n) 9 – 3.6   (o) 20 – 4.4   (p) 32 – 8.7

Apply

Question 1:   Paul buys a book that costs £6.89 and pays with a £10 note.
               How much change should Paul get?

Question 2:   Jennifer has 1.2kg of flour.
               She uses 0.75kg of the flour to bake a cake.
               How much flour does she have left?

Use number lines to support your work if needed

×	1	3	10	12	4
2					
5					
3					
6					
7					

×					

×					

Try filling out the multiplication grid, then make some of your own using the numbers 1 to 12

×					

×					

×					