

Monday – Writing decimals

Question 1 – This question shows different **representations** of decimal numbers. A **representation** refers to a number that has been shown in different ways using numerals, words or mathematical equipment, for example. To reach the correct answers, children must write the decimal which matches each representation.

A and C are both shown using a **part-whole model** to partition the decimal numbers. A **part-whole model** is used to show how numbers can be split into different parts by following the structure of part + part = whole.

B is shown on a **place value chart** which is used to identify the value of the digits that make up a number. The chart is broken up into columns which represent different values. In this example, 3 ones, 1 tenth and 1 hundredth is a way of showing the number 3.11.

D and E are both written out in words so children may find it helpful to use a **place value chart** to help them place each digit in the correct column.

The correct decimal numbers are **A = 2.62; B = 3.15; C = 1.37; D = 4.61; E = 0.53.**

Question 2 – For this question, children must read the clues given by each child and match them to the correct decimal numbers. Again, children may find it helpful to use a **place value chart** in order to accurately identify the correct decimal numbers.

The correct answers are **Joe = 1.34; Sarah = 1.47; Jane = 1.42; Ivan = 1.44.**

Question 3 – For this question, children must use the clues and the **place value chart** to find five possible numbers that the clues could describe. There are five answer boxes split into ones, tenths and hundredths to help children to work out the different possibilities. As there are various correct answers for this problem, we have included six possibilities below.

5.43, 5.46, 5.49, 6.43, 6.46, 6.49

Tuesday – Compare decimals

Question 1 – For this question, children must match each decimal number to the correct description. They must use what they know about the place value of the digits to find the correct answers.

The correct answers are $A = 1.12$; $B = 1.13$; $C = 1.55$; $D = 0.09$; $E = 1$.

Question 2 – For this question, children are given comparison statements using the **more than** symbol ($>$), **less than** symbol ($<$) and **equals** symbol ($=$). As there are some digits missing, children must use the five digit cards given to complete the statements so that they are correct. Encourage children to begin by finding the statement which has only one possible answer to help them. Children may also find it useful to use or draw counters on a **place value chart** to help them compare the numbers. The correctly completed comparison statements are shown below.

$$2.57 > 2.\underline{4}6$$

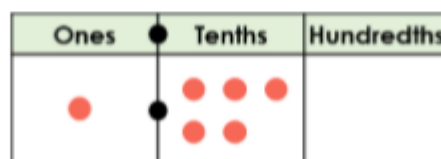
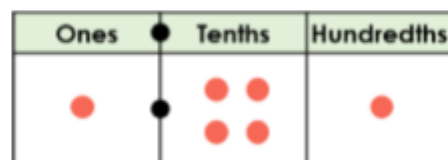
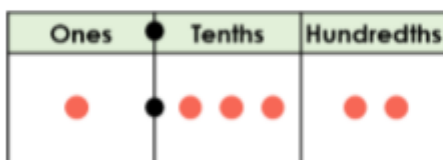
$$1.\underline{1}8 < 1.2$$

$$\underline{3}.7 = 3.7\underline{0}$$

$$1.2\underline{5} > 1.24$$

Question 3 – This question provides children with a blank **place value chart** which needs to be completed to make the statement complete. The statement uses the **less than** symbol ($<$) to compare three different decimal numbers. Children must draw a total of six counters onto the **place value chart** so that it shows a number greater than 1.31 but less than 1.56. Once they have drawn their counters, they must write the decimal that they have represented on the **place value chart**.

Using exactly six counters, 1.32 , 1.41 and 1.5 are the only possible answers. These are shown drawn below.



Wednesday – Order decimals

Question 1 – For this question, children must complete the missing values on the **number line**. A **number line** is a horizontal, straight line which has numbers placed at equal points. Most **number lines** begin at 0, however, this is not always the case.

The **number line** in this question shows the values in **ascending order**. **Ascending order** refers to values or quantities being arranged from the smallest to the greatest. As there are various answers for this question, we have given one possibility below.



Question 2 – For this question, children must look at the numbers given and order them in **descending order**. **Descending order** refers to values or quantities being arranged from the greatest to the smallest. The correct order is shown below.



Question 3 – In this question, children are shown a series of heights which have been compared using the less than symbol (<). Children may notice that the heights are given in different measurements (m and cm), so it might be helpful to begin by converting to the same unit of measure. Following this, children should explain whether Kim has ordered the heights correctly.

The correct answer is that **Kim is incorrect because Jerry is smaller than Harry and Adnan. The correct order would be 1.01m < 1.08m < 121cm < 1.32m < 1.39m < 140cm.**

Thursday – Rounding decimals

Rounding means replacing a number with an approximated value. Numbers are often rounded to the nearest 10, 100 or 1,000. Decimal numbers may also be rounded to the nearest whole number.

Question 1 – Children must **round** the numbers shown on the table to the nearest whole number. When rounding these decimal numbers, they must look at the digit in the tenths column. Children may find it help to refer to the image above the table which shows that any number less than 6.5 must be rounded down to 6.0, while any number equal to or greater than 6.5 must be rounded to 7.0. The correct answers are given below.

6.7 \Rightarrow 7.0	6.4 \Rightarrow 6.0	6.3 \Rightarrow 6.0
6.1 \Rightarrow 6.0	6.9 \Rightarrow 7.0	6.5 \Rightarrow 7.0
6.6 \Rightarrow 7.0	6.2 \Rightarrow 6.0	6.8 \Rightarrow 7.0

Question 2 – For this question, children should read the statements and identify if they are true or false. They must determine if the decimal numbers are rounded correctly to the whole number using their knowledge of rounding. The correct answers are shown below.

	True or false
7.1 rounded to the nearest whole number is 7.0	True
8.9 rounded to the nearest whole number is 8.0	False
6.5 rounded to the nearest whole number is 6.0	False
5.4 rounded to the nearest whole number is 5.0	True
4.3 rounded to the nearest whole number is 4.5	False
3.2 rounded to the nearest whole number is 3.0	True

Question 3 – For this question, children must read the statements given by the aliens and then identify their heights from the decimal values given. They must explain and justify their answers. An example explanation is given below.

Zog must 4.7m because 4.7m rounds up to 5m. The tenths digit is odd (7) and when added together, 4 and 7 make a total of 11. Oola must be 4.9m because this rounds up to 5m and is greater than 4.7m.