

# MERCURY MATHS



## Adding and Subtracting Fractions

Mercury's surface is covered in impact craters caused by asteroids. Some craters are small, while others are massive!

1. A crater is  $\frac{5}{8}$  of a kilometre wide, and another crater is  $\frac{2}{8}$  of a kilometre wide. What is the total width of both craters?

2. A large crater was originally  $\frac{7}{10}$  of a kilometre wide but has eroded by  $\frac{3}{10}$  over millions of years. What is its new width?

## Comparing and Ordering Decimals

Mercury has extreme temperature changes between day and night.

3. Which temperature is the highest?

(a)  $-180.5^{\circ}\text{C}$ , (b)  $430.2^{\circ}\text{C}$ , (c)  $427.9^{\circ}\text{C}$ , (d)  $-179.8^{\circ}\text{C}$

4. Fill in the blanks with  $>$ ,  $<$ , or  $=$

a)  $427.5^{\circ}\text{C} \underline{\hspace{1cm}} 427.50^{\circ}\text{C}$

b)  $-180.9^{\circ}\text{C} \underline{\hspace{1cm}} -181^{\circ}\text{C}$

## Converting Fractions to Decimals

Mercury orbits the Sun in just 88 Earth days. Some spacecraft take fractions of a year to reach Mercury.

5. Convert these fractions into decimals:

a) The MESSENGER spacecraft took  $\frac{3}{4}$  of a year to reach Mercury. How many decimal years is this?

b) Another spacecraft mission took  $\frac{9}{10}$  of a year. What is this as a decimal?