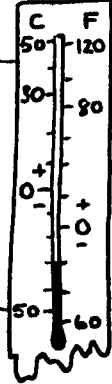


# A matter of degrees

**A**

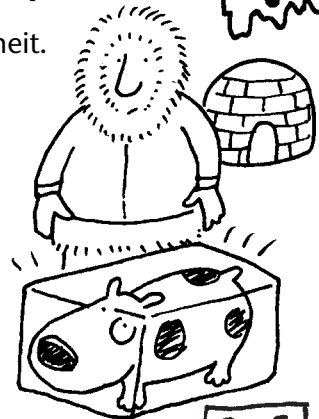
Temperature can be measured in degrees Celsius ( $^{\circ}\text{C}$ ) or in degrees Fahrenheit ( $^{\circ}\text{F}$ ). This formula shows the relationship between the two sets of units, where  $C$  stands for degrees Celsius and  $F$  for degrees Fahrenheit.

$$F = \frac{9C}{5} + 32$$



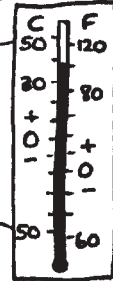
1. Convert these temperatures from degrees Celsius to degrees Fahrenheit. Give your answers to the nearest degree.

- (a)  $5^{\circ}\text{C}$      $41^{\circ}\text{F}$     (b)  $15^{\circ}\text{C}$     \_\_\_\_\_    (c)  $20^{\circ}\text{C}$     \_\_\_\_\_  
 (d)  $25^{\circ}\text{C}$     \_\_\_\_\_    (e)  $-10^{\circ}\text{C}$     \_\_\_\_\_    (f)  $-30^{\circ}\text{C}$     \_\_\_\_\_  
 (g)  $17^{\circ}\text{C}$     \_\_\_\_\_    (h)  $23^{\circ}\text{C}$     \_\_\_\_\_    (i)  $32^{\circ}\text{C}$     \_\_\_\_\_  
 (j)  $37^{\circ}\text{C}$     \_\_\_\_\_    (k)  $41^{\circ}\text{C}$     \_\_\_\_\_    (l)  $44^{\circ}\text{C}$     \_\_\_\_\_  
 (m)  $-22^{\circ}\text{C}$     \_\_\_\_\_    (n)  $-24^{\circ}\text{C}$     \_\_\_\_\_    (o)  $-28^{\circ}\text{C}$     \_\_\_\_\_



The formula above can be rewritten to make  $C$  the subject of the formula.

$$C = \frac{5}{9}(F - 32)$$



2. Use this new formula to convert these temperatures from degrees Fahrenheit to degrees Celsius. Give your answers to the nearest degree.

- (a)  $50^{\circ}\text{F}$      $10^{\circ}\text{C}$     (b)  $95^{\circ}\text{F}$     \_\_\_\_\_    (c)  $104^{\circ}\text{F}$     \_\_\_\_\_  
 (d)  $23^{\circ}\text{F}$     \_\_\_\_\_    (e)  $5^{\circ}\text{F}$     \_\_\_\_\_    (f)  $-13^{\circ}\text{F}$     \_\_\_\_\_  
 (g)  $32^{\circ}\text{F}$     \_\_\_\_\_    (h)  $47^{\circ}\text{F}$     \_\_\_\_\_    (i)  $53^{\circ}\text{F}$     \_\_\_\_\_  
 (j)  $59^{\circ}\text{F}$     \_\_\_\_\_    (k)  $64^{\circ}\text{F}$     \_\_\_\_\_    (l)  $75^{\circ}\text{F}$     \_\_\_\_\_  
 (m)  $82^{\circ}\text{F}$     \_\_\_\_\_    (n)  $-20^{\circ}\text{F}$     \_\_\_\_\_    (o)  $-24^{\circ}\text{F}$     \_\_\_\_\_



**B**

One of the following is an alternative formula for converting from degrees Celsius to degrees Fahrenheit. Substitute several of the temperatures in question 1 into each formula to find which one is correct.

$$F = \frac{5C}{9} - 32$$

$$F = \frac{4}{5}(C + 32)$$

$$F = \frac{9}{5}(C + 40) - 40$$

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____



Give your answers to the nearest degree by rounding up or down. The formula for converting between Celsius and Fahrenheit temperatures can be expressed in many different ways (for example, where  $C$  or  $F$  is the subject of the formula, and with or without brackets).