

Integers

Counting, ordering and comparing

1. **a)** Circle all the integers. -4 ; π ; 15 ; 0 ; $\frac{7}{8}$; -11 ; $1,25$; $\frac{12}{2}$; $-3,0$; $-\frac{3}{5}$

b) Plot the integers on this number line.



2. Fill in $<$ or $>$ between each pair of numbers.

a) 120 75

b) 75 120

c) -120 -75

d) -75 -120

3. The following temperatures were recorded on a winter's morning.

10°C	-8°C	0°C	-5°C	4°C	-6°C
8°C	-2°C	-14°C	1°C	12°C	-11°C

Complete.

a) The coldest temperature was .

b) The hottest temperature was .

c) Arrange the temperatures below freezing point in ascending order.

d) Arrange the temperatures above freezing point in descending order.

Use the following number line to answer Question 4 and 5.



4. Write down the number that is exactly in the middle of each of the following pairs.

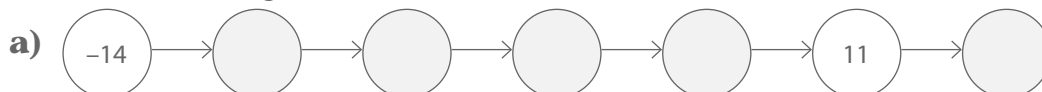
a) 3 and 13

b) -11 and -5

c) 6 and -8

d) -14 and 6

5. Fill in the missing numbers.



Integers

Calculations and properties

1. Work out each answer. Circle the odd question. Write the common total of the other three questions in the middle of the diagram.

a)

$-5 + 25$	○	$16 - (-4)$
$24 - (+4)$		$15 + (-5)$

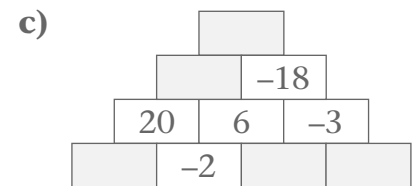
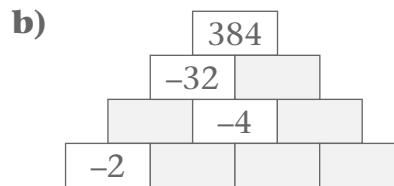
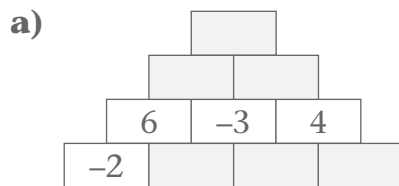
b)

$30 - (-6)$	○	$-(20 + 4)$
$-10 + (-14)$		$-28 + 4$

c)

$-12 + (-7)$	○	$-10 + 9$
$11 + (-30)$		$-6 - (13)$

2. Complete the pyramids. Each brick is the product of the two bricks directly below.



3. Complete the following two calculations.

a) $-17 + 18 - (-40)$
 $= [-17 + 18] - (-40)$
 $=$
 $=$

b) $-17 + 18 - (-40)$
 $= -17 + [18 - (-40)]$
 $=$
 $=$

c) What do you notice?

d) Now calculate the following in two different ways: $(-5) \times (-12) \times (-4)$

4. Explain:

a) the difference between -8^2 and $(-8)^2$

b) why a calculator gives 'Error' if you ask for $\sqrt{-8^2}$

c) why 6 is the cube root of 216

5. Mr Cordon's age is the product of the additive inverse of 12 and the multiplicative inverse of $-\frac{1}{6}$.

How old is Mr Cordon?