



Integers

- Multiplying and dividing integers

Keywords

You should know

explanation 1a

explanation 1b

1 Work these out.

a $4 - 8$

b $-9 + 23$

c $26 - 32$

d $-18 + 36$

e $14 + 17 - 20$

f $-22 - 13 + 16$

g $-12 + 15 + 26$

h $-32 - 8 + 15$

2 Copy and complete these.

a $5 + -2 = 5 \square 2 = \square$

b $-3 - -7 = -3 \square 7 = \square$

c $0 - -9 = 0 \square 9 = \square$

d $-11 + -12 - -6 = -11 \square 12 \square 6 = \square$

e $20 + -13 - -15 = 20 \square 13 \square 15 = \square$

f $14 - -24 + -18 = 14 \square 24 \square 18 = \square$

3 Work these out.

a $14 - -15$

b $-21 - 12$

c $42 + -15$

d $-33 + -12$

e $-15 - -12 + 4$

f $18 - -23 + -30$

g $-22 + -4 - -8$

h $-26 - -19 + 10$

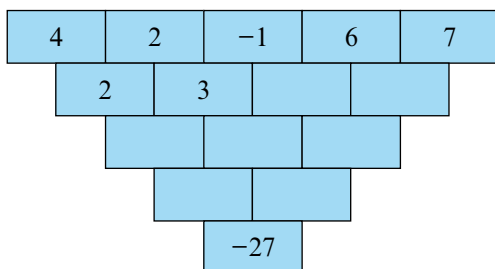
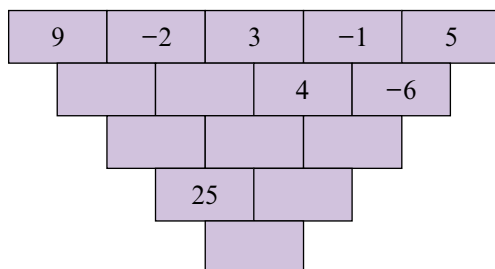
i $14 - 6 - -18$

4 Copy and complete the table.

First number	18	7	11	3	-4	-7	-12	
Second number	13	12	-2		-6		-5	-9
First number - second number	5			1		0		4

- 5** Copy and complete these subtraction walls. Subtract the right-hand number from the left-hand number and write the answer below the two numbers.

a

**b**

- 6** Lee has £56 pounds in his savings account. On Saturday he takes out £14 to buy a DVD. He receives £25 for his birthday which he pays into his account.

a How much is now in his account?

b How much more is now in his account than before he bought the DVD?

- 7** Use the patterns in these numbers to copy and complete these multiplication tables.

a i $3 \times 3 = 9$

$2 \times 3 = \square$

$$1 \times 3 = 3$$

$$0 \times 3 = 0$$

$$-1 \times 3 = -3$$

$$-2 \times 3 = \square$$

$$-3 \times 3 = -9$$

ii $3 \times -3 = -9$

$2 \times -3 = \square$

$$1 \times -3 = -3$$

$0 \times -3 = \square$

$$-1 \times -3 = \boxed{}$$

$$-2 \times -3 = 6$$

$$-3 \times -3 = \boxed{}$$

b Describe the pattern in the answer columns.

c What do you notice about the answer when a negative number and a positive number are multiplied together?

d What can you say about the answer when two negative numbers are multiplied together?

explanation 2

8 Work these out.

a 2×-6

b -7×-4

c -3×7

d 9×-8

e 5×-12

f -8×15

g -10×-23

h -6×20

i -16×-4

j -100×32

k 50×-14

l -25×-5

9 a Find two numbers such that $\square \times \square = -8$.

b Find three more pairs of numbers that multiply to give -8 .

10 Find two numbers that multiply to give these numbers.

a -10

b -6

c -14

d 55

e -21

11 Find three more different pairs of numbers that multiply to give each number in question **10**.

12 a Find two numbers that add to give 2 and multiply to give -15 .

b Find two numbers that add to give -10 and multiply to give 24.

13 Copy and complete this multiplication grid.

\times	-2		3	-7
		20		
-9		-45		
			-9	
				-42

explanation 3

14 Work these out.

a $45 \div -5$

b $-36 \div -4$

c $-20 \div 2$

d $-30 \div 6$

e $56 \div -7$

f $72 \div -8$

g $-60 \div 4$

h $-96 \div -12$

i $-120 \div -8$

j $64 \div -8$

k $-48 \div -3$

l $100 \div -25$

15 a How many times does -3 fit into -12 ?

b How many times does -7 fit into -63 ?

16 Using multiplication or division and positive and negative numbers, write four calculations that give each answer.

a -16 **b** 32 **c** -42 **d** -60

17 Given $-3 \times 4 = -12$, you can write three more facts:

$$4 \times -3 = -12$$

$$-12 \div 4 = -3$$

$$-12 \div -3 = 4$$

Do the same for these.

a $-4 \times 6 = -24$

b $3 \times -7 = -21$

c $9 \times -5 = -45$

d $-12 \times 8 = -96$

18 Copy and complete the table.

First number	36	-84	-48		72	-65		-17
Second number	-9	12		-8	-2		13	
First number \div second			-6	-8		5	-3	-17

19 Use the formula $m = -6n$.

a Find the value of m for these values of n .

i -1

ii 12

iii -15

iv 9

v -21

vi 14

b Some values of m are given below.

Find the value of n in the formula that would give each value of m .

i -18

ii -60

iii 72

iv 15

v -96

vi 48