# Chapter 3 Four operations with integers

# Excel Mathematics Study Guide Year 8 Pages 16–17

## **UNIT 1: Addition of integers**

QUESTION **1** Find the sum of the following (use a number line if necessary).

**h** 
$$10 + -2 =$$

QUESTION **2** Find each sum.

**d** 
$$7 + -3 =$$

QUESTION **3** Add the following.

$$a + 3 =$$

**d** 
$$-2 + -3 =$$

$$f 7 + -5 =$$

QUESTION **4** Find the answers to these additions.

$$a 10 + 14 =$$

**b** 
$$-3 + -2 =$$

$$\mathbf{c}$$
 -7 + 22 = \_\_\_\_\_

**d** 
$$9 + -2 =$$

$$e -6 + 42 =$$

$$\mathbf{f} = -9 + -5 =$$

$$\mathbf{g} = 4 + 8 =$$

$$h -8 + -3 =$$

QUESTION **5** Find the values of the following.

$$a -3 + 6 + 8 =$$

$$c -16 + 31 =$$

$$\mathbf{d} -15 + 10 = \underline{\phantom{0}}$$

$$\mathbf{f} -7 + -6 =$$

$$\mathbf{g} -11 + 9 + 2 = \underline{\hspace{1cm}}$$

$$\mathbf{h}$$
 -10 + -5 + -2 = \_\_\_\_\_

QUESTION **6** Find the missing number.

**b** 
$$----+-3 = 12$$

**d** 
$$6 + \underline{\hspace{1cm}} = -9$$

$$\mathbf{f}$$
 8 + \_\_\_\_\_ = -7

**h** 
$$(-8) + -4 =$$

# Excel Mathematics Study Guide Year 8

# **UNIT 2: Subtraction of integers**

QUESTION 1 Find the answers for the following questions.

QUESTION 2 Complete these subtractions (use a number line if necessary).

QUESTION 3 Find each difference.

$$a = 17 - 4 -$$

$$-8 - 2 =$$

**d** 
$$-15 - -3 =$$
 \_\_\_\_\_

**h** 
$$-12 - -8 =$$
 \_\_\_\_\_ **i**  $-7 - 21 =$  \_\_\_\_\_

Find the answers for the following subtractions.

QUESTION **5** Find the values of the following.

QUESTION 6 Simplify the following.

### Excel Mathematics Study Guide Year 8 Pages 16-17

## **UNIT 3: Multiplication of integers**

QUESTION 1 Multiply the following.

**f** 
$$12 \times -8 =$$
 \_\_\_\_\_

**h** 
$$6 \times -15 =$$
 \_\_\_\_\_

QUESTION 2 Work out the following.

**b** 
$$5 \times -3 =$$

**f** 
$$6 \times -7 =$$
 \_\_\_\_\_

**h** 
$$9 \times -7 =$$
 \_\_\_\_\_

QUESTION 3 Find the answers to the following.

**a** 
$$-3 \times 12 =$$
 \_\_\_\_\_

**b** 
$$-4 \times -3 =$$
 \_\_\_\_\_

**b** 
$$-4 \times -3 =$$
 \_\_\_\_\_ **c**  $-5 \times 11 =$  \_\_\_\_\_

**d** 
$$-5 \times -9 =$$
 \_\_\_\_\_

$$\mathbf{f} -7 \times -20 =$$

**h** 
$$-3 \times -9 =$$
 \_\_\_\_\_

QUESTION 4 Simplify.

**a** 
$$-3 \times 7 =$$
 \_\_\_\_\_

$$\mathbf{c} = -8 \times 4 =$$

**d** 
$$-2 \times -12 =$$

**e** 
$$-3 \times 15 =$$
 **f**  $-5 \times -12 =$ 

$$f = -5 \times -12 =$$

**h** 
$$-4 \times -8 =$$
 \_\_\_\_\_

QUESTION **5** Find each product.

$$\mathbf{a} \quad 4 \times 8 \times 2 = \underline{\hspace{1cm}}$$

**d** 
$$9 \times -2 \times -2 =$$

$$e -4 \times 5 \times -3 =$$

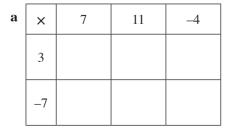
\_\_\_\_\_ **f** 
$$2 \times -3 \times 4 =$$
 \_\_\_\_\_

$$\mathbf{g} = 6 \times 8 \times -1 =$$

**h** 
$$-3 \times -10 \times -7 =$$
 \_\_\_\_\_

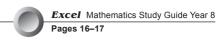
**h** 
$$-3 \times -10 \times -7 =$$
 **i**  $-1 \times -2 \times -5 \times -3 =$ 

QUESTION 6 Complete the following tables.



b	×	-5	_9	8
	7			
	-10			

c	×	12	-25	-100
	-4			
	12			



## **UNIT 4: Division of integers**

#### QUESTION 1 Divide the following.

**a** 
$$24 \div 4 =$$
 \_\_\_\_\_\_

**b** 
$$42 \div -0 =$$
 \_\_\_\_\_

**b** 
$$42 \div -6 =$$
 \_\_\_\_\_ **c**  $54 \div 9 =$  \_\_\_\_\_

**d** 
$$36 \div -9 =$$

**f** 
$$21 \div -3 =$$
 \_\_\_\_\_

$$\mathbf{g} = 16 \div 8 =$$

**h** 
$$55 \div -5 =$$
 \_\_\_\_\_\_

#### QUESTION 2 Work out the following divisions.

**b** 
$$24 \div -8 =$$
 \_\_\_\_\_

**d** 
$$-20 \div 4 =$$
 \_\_\_\_\_

e 
$$-45 \div -5 =$$
 \_\_\_\_\_

$$\mathbf{f} = 28 \div -7 =$$

#### QUESTION 3 Simplify the following.

**a** 
$$-27 \div 3 =$$
 \_\_\_\_\_

**b** 
$$-24 \div -6 =$$
 \_\_\_\_\_ **c**  $36 \div 12 =$  \_\_\_\_\_

$$c \quad 36 \div 12 =$$

**d** 
$$-27 \div -9 =$$

**f** 
$$5 \div -5 =$$
 \_\_\_\_\_\_

**g** 
$$33 \div -11 =$$
 \_\_\_\_\_

**h** 
$$-36 \div -3 =$$
 \_\_\_\_\_

#### QUESTION 4 If a = 2, b = -4, c = 8 and d = -24, find the value of:

$$\mathbf{a} d \div b$$

**b** 
$$b \div a$$

$$\mathbf{c} \quad d \div c$$

**d** 
$$ab \div c$$

e 
$$bc \div a$$

**f** 
$$d \div ab$$

$$\mathbf{g} \quad a^2 \div b$$

$$b^2 \div c$$

**i** 
$$ad \div b^2$$
 \_\_\_\_\_

#### QUESTION **5** Fill in each missing number.

**d** 
$$=$$
  $\div -5 = -7$ 

**f** 
$$= -8$$

$$\mathbf{g} -300 \div -50 = \underline{\hspace{1cm}}$$

**h** 
$$\div -6 = 4$$

## Simplify the following.

**a** 
$$-45 \div -9 \div -1$$

**b** 
$$-60 \div 3 \div -5$$
 \_\_\_\_\_ **c**  $-20 \div -2 \div -2$  \_\_\_\_\_

e 
$$120 \div -12 \div 2$$
 f  $-60 \div -20 \div -3$ 

$$\mathbf{f} = -60 \div -20 \div -3$$

$$\mathbf{g} \quad 48 \div 4 \div -6$$

# Excel Mathematics Study Guide Year 8

### **UNIT 5: Mixed questions**

#### QUESTION 1 Find answers to the following.

$$\mathbf{f} = 3 + -5 =$$

**h** 
$$-2 + -10 =$$
 \_\_\_\_\_ **i**  $-5 - -12 =$  \_\_\_\_

### Find the value of the following.

**b** 
$$-16 \div -8 =$$
 **c**  $54 \div -6 =$ 

**c** 
$$54 \div -6 =$$
 \_\_\_\_\_\_

**d** 
$$-3 \times 7 =$$

e 
$$11 \times -7 =$$
 \_\_\_\_\_

$$\mathbf{f} -56 \div 7 =$$

**g** 
$$-2 \times 5 \times -9 =$$
 **i**  $-3 \times -4 \times -6 =$ 

i 
$$-3 \times -4 \times -6 =$$

#### QUESTION 3 Work out the following.

$$\mathbf{a} -3 + -5 =$$

**b** 
$$-3 \times -5 =$$
 \_\_\_\_\_ **c**  $10 \div -2 =$  \_\_\_\_

$$c 10 \div -2 =$$

**d** 
$$10 - -2 =$$

$$\mathbf{f} -12 \div -4 =$$

#### QUESTION 4 Simplify the following.

**a** 
$$(3+4) \times -2 =$$
 \_\_\_\_\_

**b** 
$$5 \times (4-5) =$$
 \_\_\_\_\_ **c**  $(-6+4) \times 8 =$  \_\_\_\_\_

$$\mathbf{c} \quad (-6+4) \times 8 = \underline{\hspace{1cm}}$$

**d** 
$$-20 \div -5 \div -2 =$$

**e** 
$$12 \times 3 \div -9 =$$
 \_\_\_\_\_

$$\mathbf{f} -3 - 7 - 8 =$$

**g** 
$$(5+-5) \times -38 =$$
 **h**  $(-2-5) \times -7 =$  **i**  $(-4+12) \div -2 =$  \_\_\_\_\_

$$(-2-5) \times -7 =$$

$$i (-4 + 12) \div -2 =$$

#### QUESTION **5** Fill in each missing number.

**b** 
$$\div$$
 7 = -6

**d** 
$$\times -2 = -100$$

$$e - + 8 = 3$$

$$\mathbf{g} - 81 \div \underline{\hspace{1cm}} = 9$$

**h** 
$$-4 - \underline{\hspace{1cm}} = 5$$

$$i = -2$$

#### QUESTION 6 Complete the following tables.

+	3	<b>–</b> 7	<b>-</b> 9	12	-15
-1					
6					
-8					

×	-4	5	-10	8	_9
-5					
11					
-6					

b