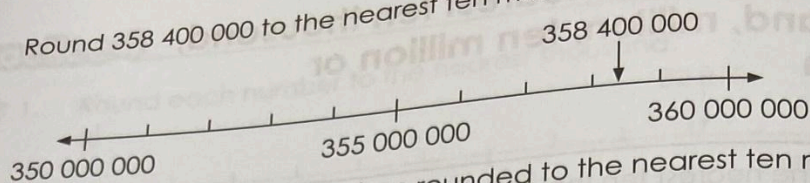
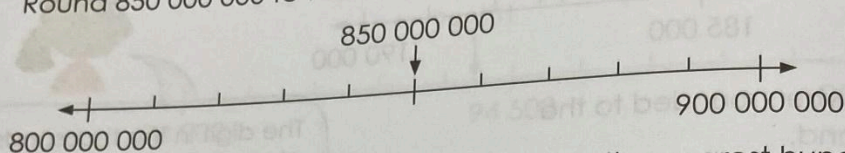


d) Round 358 400 000 to the nearest ten million.



358 400 000 is 360 000 000 when rounded to the nearest ten million.  
 $358\,400\,000 \approx 360\,000\,000$

e) Round 850 000 000 to the nearest hundred million.



850 000 000 is 900 000 000 when rounded to the nearest hundred million.  
 $850\,000\,000 \approx 900\,000\,000$

Look at the digit in the place value on the right of the place value to be rounded to. To round a number to the nearest ten million, we look at the digit in the millions place.

$$426\,958\,430 \approx 430\,000\,000$$

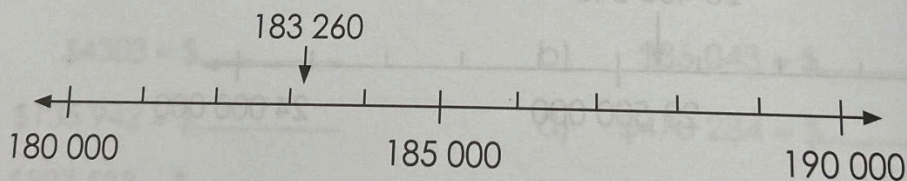
An arrow points to the digit 9 in the millions place of the number 426 958 430.

## Practice 5



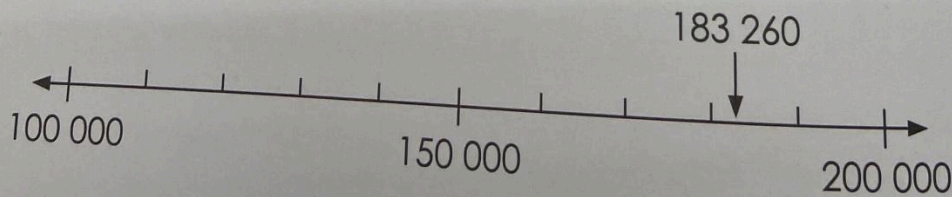
1. Round 183 260 to the nearest ten thousand and hundred thousand.

a)



183 260 is \_\_\_\_\_ when rounded to the nearest ten thousand.

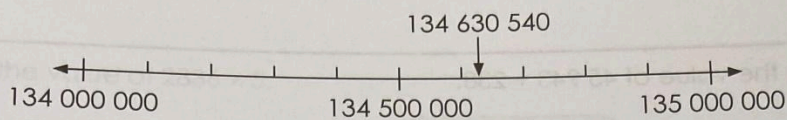
b)



183 260 is \_\_\_\_\_ when rounded to the nearest hundred thousand.

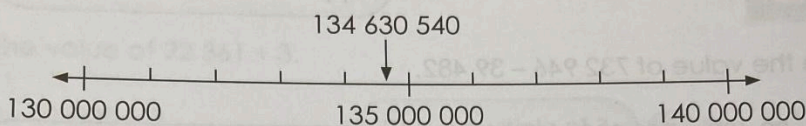
2. Round 134 630 540 to the nearest million and ten million.

a)



134 630 540 is \_\_\_\_\_ when rounded to the nearest million.

b)



134 630 540 is \_\_\_\_\_ when rounded to the nearest ten million.

3. Round 309 898 423 to the nearest ten million and hundred million.

a) 309 898 423 is \_\_\_\_\_ when rounded to the nearest ten million.

b) 309 898 423 is \_\_\_\_\_ when rounded to the nearest hundred million.

4. Complete the table.

Number	Rounded to the nearest		
	ten thousand	hundred thousand	million
6 485 300			
57 162 380			

5. Complete the table.

Number	Rounded to the nearest		
	million	ten million	hundred million
452 901 546			
973 462 125			

## Estimating sums and differences

### Learn

- a) Estimate the value of  $45\,943 + 238$ .

$$45\,943 + 238 \approx 50\,000 + 200 \\ = 50\,200$$

Remember to use  $\approx$  to show that  $45\,943 + 238$  is approximately  $50\,000 + 200$ .



- b) Estimate the value of  $732\,946 - 39\,482$ .

$$732\,946 - 39\,482 \approx 700\,000 - 40\,000 \\ = 660\,000$$

Round  $732\,946$  to the nearest hundred thousand.  
Round  $39\,482$  to the nearest ten thousand.



### Practice 6



1. Estimate the value of each of the following.

a)  $26\,380 + 2\,998$

b)  $394\,188 - 23\,782$

2. Estimate the value of each of the following.

a)  $3\,495 + 8\,323$

b)  $14\,034 + 49\,258$

c)  $989\,056 + 65\,768$

d)  $215\,495 + 2\,876\,342$

3. Estimate the value of each of the following.

a)  $5\,287 - 2\,128$

b)  $23\,541 - 7\,812$

c)  $69\,853 - 45\,914$

d)  $9\,275\,439 - 2\,349\,845$

# Estimating products and quotients

## Learn

- a) Estimate the value of  $2836 \times 5$ .

$$2836 \times 5 \approx 3000 \times 5 \\ = 15\,000$$

3 thousands  $\times$  5  
= 15 thousands



- b) Estimate the value of  $22\,361 \div 3$ .

$$22\,361 \div 3 \approx 21\,000 \div 3 \\ = 7\,000$$

21 is a multiple of 3.  
 $22\,361 \approx 21\,000$   
 $21\,000 \div 3$   
= 7 thousands



## Practice 7



1. Estimate the value of each of the following.

a)  $58\,409 \times 6$

b)  $349\,881 \div 7$

2. Estimate the value of each of the following.

a)  $4606 \times 2$

b)  $6521 \times 8$

c)  $81\,429 \times 6$

d)  $734\,959 \times 3$

3. Estimate the value of each of the following.

a)  $3476 \div 4$

b)  $43\,912 \div 6$

c)  $77\,239 \div 5$

d)  $798\,691 \div 8$

## Lesson 3 Factors

### Learning Outcomes:

- Find the common factors of two numbers
- Find the greatest common factor of two numbers

### Finding common factors of two numbers

#### Learn

The factors of 12 are **1, 2, 3, 4, 6, 12**.

The factors of 20 are **1, 2, 4, 5, 10, 20**.

The **common factors** of 12 and 20 are 1, 2 and 4.

The **greatest common factor** of 12 and 20 is 4.

### Finding out if a number is a common factor of two given numbers

#### Learn

- a) Find out if 3 is a common factor of 36 and 54.

$$\begin{array}{r} 12 \\ 3 \overline{) 36} \\ \underline{3} \phantom{6} \\ 6 \\ \underline{6} \\ 0 \end{array}$$

$$\begin{array}{r} 18 \\ 3 \overline{) 54} \\ \underline{3} \phantom{4} \\ 24 \\ \underline{24} \\ 0 \end{array}$$

36 and 54 can be divided by 3 exactly.  
3 is a factor of 36.  
3 is also a factor of 54.



3 is a common factor of 36 and 54.

- b) Find out if 3 is a common factor of 49 and 72.

$$\begin{array}{r} 24 \\ 3 \overline{) 72} \\ \underline{6} \phantom{2} \\ 12 \\ \underline{12} \\ 0 \end{array}$$

$$\begin{array}{r} 16 \\ 3 \overline{) 49} \\ \underline{3} \phantom{9} \\ 19 \\ \underline{18} \\ 1 \end{array}$$

72 can be divided by 3 exactly. 49 cannot be divided by 3 exactly.  
3 is a factor of 72 but not a factor of 49.



3 is not a common factor of 49 and 72.

