

UNIT 1

NUMBER CONCEPTS

- 1.1 Multiples of Numbers and Skip Counting**
- 1.2 Reading and Writing Numbers using Place Value**
- 1.3 Comparing and Ordering Numbers to 1000**
- 1.4 Estimating Quantities Less Than 1000**

If you need additional help, there are more resources available at math-help.ca/more.

1.1 Multiples of Numbers and Skip Counting

Multiples of Numbers

When we add a number to itself, we end up with a multiple of that number. If we multiply a number by another whole number, we also end up with a multiple of the number.

Examples:

$$3 + \underline{3} = 6 \quad 6 \text{ is a multiple of } 3.$$

$$7 + \underline{7} = 14 \quad 14 \text{ is a multiple of } 7.$$

$$5 \times \underline{2} = 10, 5 \times \underline{3} = 15, 5 \times \underline{4} = 20 \quad 10, 15, \text{ and } 20 \text{ are all multiples of } 5.$$

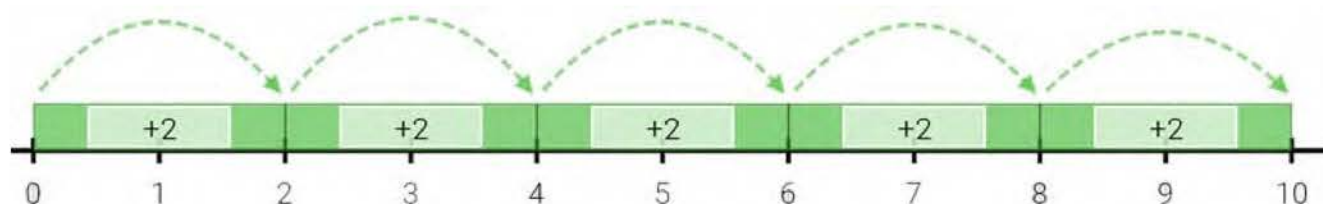
We can find multiples of numbers by skip counting forwards and backwards.

Skip Counting Forward

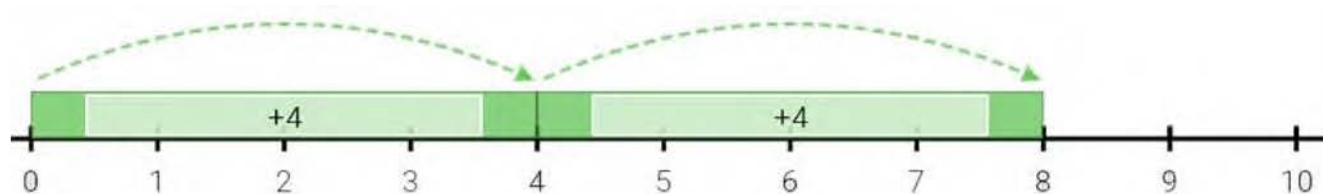
If we start with a number and then add the same number to it each time to produce the next one, we call it **skip counting forward**.

Examples:

1. Skip Counting Forward by 2



2. Skip Counting Forward by 4



3. Find the missing number.

3, 6, 9, 12, _____, 18, 21

This involves skip counting forward by 3.

For example, $3 + 3 = 6$, $6 + 3 = 9$, $9 + 3 = 12$, $18 + 3 = 21$. The missing number is $12 + 3 = 15$.

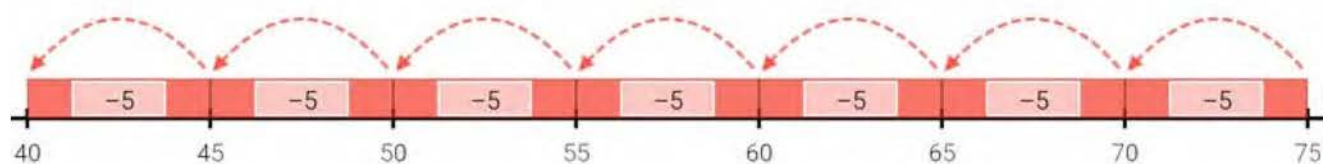
Note: Each time we produced multiples of the number we started with.

Skip Counting Backward

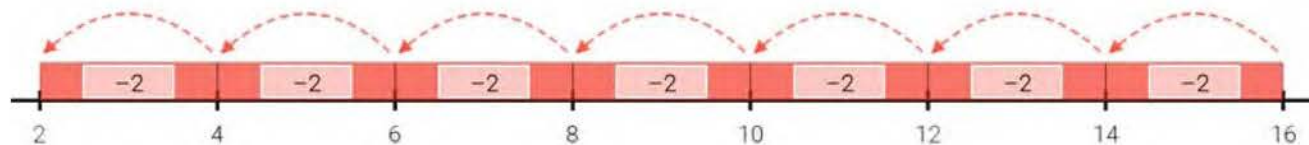
If we start with a number and subtract the same number from it each time, we call it **skip counting backward**.

Examples:

1. Skip Counting Backward by 5, starting at 75.



2. Skip Counting Backward by 2, starting at 16.



3. Find the missing number.

150, 125, 100, 75, _____, 25

This involves skip counting backwards by 25.

For example, $125 - 25 = 100$, $100 - 25 = 75$. The missing number is $75 - 25 = 50$.

Note: Each time we produced multiples of the number we started with.

Examples with Solutions

1. Start with 5 and then skip count forward by 2 until you have seven numbers altogether.

(i) Begin with 5.

(ii) Add two to 5 to get 7. $(5 + 2 = 7)$

(iii) Add two to 7 to get 9. $(7 + 2 = 9)$

(iv) Continue adding 2 until you have a total of seven numbers.

5, 7, 9, 11, 13, 15, 17

2. Start with 30 and then skip count backward by 5 until you reach zero.

(i) Begin with 30.

(ii) Subtract 5 from 30 to get 25.

(iii) Subtract 5 from 25 to get 20

(iv) Continue subtracting 5 until you end up at zero.

30, 25, 20, 15, 10, 5, 0

3. Fill in the blanks.

45, 50, __, __, 65, __, __, __

(i) Examine the first two numbers. What can you do to the first to get the second?

(ii) If you add 5 to the first number it will give you the second number.

(iii) If you continue to add 5 to the next two numbers, you get 65 as the fifth number. This confirms that you should skip count forward by 5's to fill in the blanks as shown.

45, 50, 55, 60, 65, 70, 75, 80

4. Fill in the blanks.

175, 150, __, 100, __, 50, 25

- (i) Examine the first two numbers. What can you do to the first to get the second?
- (ii) If you subtract 25 from the first number it will give you the second one.
- (iii) If you continue to subtract 25 the third number becomes 125 and the next becomes 100. This confirms that you should skip count backward by 25's to fill in the blanks as shown.

175, 150, 125, 100, 75, 50, 25

5. List all multiples of 3 between 9 and 27.

- (i) Both 9 and 27 are multiples of 3.
- (ii) Use skip counting forward by 3 to find all multiples between the two numbers.
- (iii) The solution is arrived at as follows: $9 + 3 = 12$, $12 + 3 = 15$, $15 + 3 = 18$,
 $18 + 3 = 21$, $21 + 3 = 24$, $24 + 3 = 27$
- (iv) Multiples of 3 between 9 and 27 are: **12, 15, 18, 21, and 24**

6. List all multiples of 10 between 90 and 40.

- (i) Both 90 and 40 are multiples of 10.
- (ii) Use skip counting backward by 10 to find all multiples between the two numbers.
- (iii) The solution is arrived at as follows:
 $90 - 10 = 80$, $80 - 10 = 70$, $70 - 10 = 60$, $60 - 10 = 50$, $50 - 10 = 40$
- (iv) Multiples of 10 between 90 and 40 are: **80, 70, 60, and 50**

7. List all multiples of 5 between 12 and 32.

(i) 12 is not a multiple of 5, so the lowest number greater than 12 that is a multiple of 5 is 15.

(ii) Use skip counting forward by 5 from 15.

(iii) The solution is arrived at as follows:

$$15 + 5 = 20, 20 + 5 = 25, 25 + 5 = 30, 30 + 5 = 35$$

This last number is greater than 32, so it is not part of the answer.

(iv) Multiples of 5 between 12 and 32 are: **15, 20, 25, and 30**

8. One of the following numbers is not part of the pattern. Which one is it?

3, 6, 9, 13, 15

(i) Examine the first two numbers. What can you do to the first to get the second?

(ii) If you add 3 to the first number, it will give you the second one and if you add 3 to the second it will give you the third number.

(iii) If you add 3 to the third number, you should get 12 instead of 13 and 12 plus 3 is 15.

(iv) The number that is not part of the pattern is **13**.

Exercises 1.1

Skip count by 2. Fill in each blank in questions #1 to 4.

1.

26	28						40		
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2.

46		50						62	
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3.

20	18	16				8			
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4.

	30	28	26				18		
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Skip count by 5. Fill in each blank in questions #5 to 7.

5.

35	40								
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6.

90	85		75						
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7.

75	70	65						35	
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Skip count by 10. Fill in each blank in questions #8 to 11.

8.

70			100	110					
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9.

	40	50			80				120
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10.

120	110					60			
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11.

	90	80		60			30		
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12. What is the skip counting pattern shown in the following numbers?

37, 40, 43, 46, 49, ...

13. What is the skip counting pattern shown in the following numbers?

112, 102, 92, 82, ...

14. Find all multiples of 5 between 30 and 55.

15. Find all multiples of 4 between 44 and 32.

16. Use skip counting to find the next three numbers in each pattern.

a. 6, 12, 18, ____, ____, ____

b. 100, 103, 106, ____, ____, ____

ABORIGINAL APPLICATIONS

USING ESTIMATION AND REFERENTS WHEN TRADING GOODS



Salmon being Dried



**Oolichans for Oil Extraction,
Drying and Smoking**



Using a Fish Trap to Catch Fish



Using a Seine Boat to Catch Fish

Estimation was used by First Nations people when trading for goods and services. In early days, First Nations people in British Columbia developed and used a system of trading where goods that were plentiful in one area of the province were traded for other goods or services that were available in another area.

Salmon from the coast was processed in a variety of ways, such as smoking and drying, before being traded for other items, such as clothing, art work, and other food products. Another popular fish product was oil or grease from the **oolichan**, a small fish from which a very popular oil was extracted for use in cooking and as a health drink.

Estimation was often used when goods were traded. For example, a vat of oolichan oil could be measured by the number of buckets it held, animal fur could be measured by height when stacked on top of one another, or parts of the body could be used to measure size of an animal (How many hand widths is the length of a beaver skin?).

ANSWERS TO EXERCISES AND UNIT TESTS

UNIT 1

Exercises 1.1 (page 7)

1.

26	28	30	32	34	36	38	40	42	44
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2.

46	48	50	52	54	56	58	60	62	64
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3.

20	18	16	14	12	10	8	6	4	2
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4.

32	30	28	26	24	22	20	18	16	14
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5.

35	40	45	50	55	60	65	70	75	80
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6.

90	85	80	75	70	65	60	55	50	45
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7.

75	70	65	60	55	50	45	40	35	30
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8.

70	80	90	100	110	120	130	140	150	160
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9.

30	40	50	60	70	80	90	100	110	120
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10.

120	110	100	90	80	70	60	50	40	30
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11.

100	90	80	70	60	50	40	30	20	10
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12. skip count forward by 3 13. skip count backward by 10 14. 35, 40, 45, 50
 15. 40, 36 16. a) 24, 30, 36 b) 109, 112, 115 c) 64, 60, 56 d) 80, 75, 70

17.

32	34	36	38	40	42	44	46	48	50
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18.

65	60	55	50	45	40	35	30	25	20
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19.

19	24	29	34	39	44	49	54	59	64
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20.

3	6	9	12	15	18	21	24	27	30
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21. 20, 25, 30, 35, 40 22. 200, 225, 250
 23. \$90, \$100, \$110 24. 100, 200
 25. 10, 20, 30 26. 60

Exercises 1.2 (page 15)

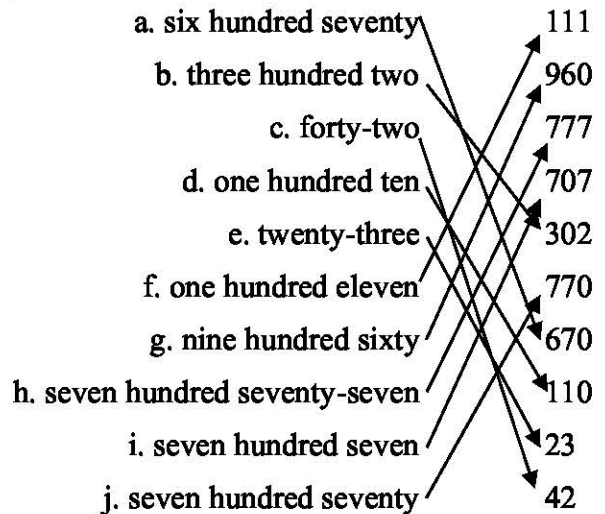
1.

- a) 9
- b) 52
- c) 206
- d) 630
- e) 510
- f) 315
- g) 12

hundreds	tens	ones
0	0	9
0	5	2
2	0	6
6	3	0
5	1	0
3	1	5
0	1	2

- 2. a) 775 b) 256 c) 805 d) 999
- e) 703 f) 650 g) 50 h) 303 3. a) 812
- b) 621 c) 807 d) 268 e) 801 f) 205
- 4. a) five hundred six b) seventy-seven
- c) eight hundred thirty-five d) six hundred sixty
- e) four hundred one f) ninety-five

5.



- 6. a) 412 b) 609 c) 705 d) 402
- e) 772 f) 501 g) 217 h) 400
- 7. a) five hundred twenty-eight
- b) nine hundred fifty c) two hundred fifty
- d) four hundred twenty 8) 203
- 9. 390 10. 45 11. 117 12. 1234
- 13. 421 14. 8045 15. 5555