UNIT 3: INTEGER NUMBERS

Exercise 1: Express the following quantities using integer numbers:

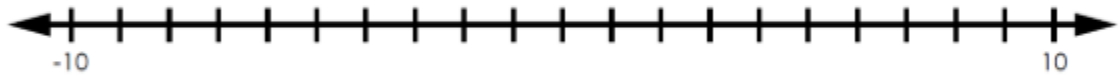
a) I won 50€ in the lottery
b) I have lost a 5€ bill
c) The submarine is 40 meters below the sea level
d) I live on the second floor
e) I parked the car on the first basement
f) The freezer has a temperature of 18 degrees below zero

Exercise 2: Express the following situations using integer numbers:

a) The temperature outside a ski lodge is three degrees below zero
b) A fisherman is sitting on a pier two feet above the water surface
c) The sink of the fisherman is six feet below the surface
d) Mr. Smith lost €450 on his investment
e) John gained fifteen dollars, but then he lost 20 dollars
f) The car was parked on the first basement
g) My mom gave me €30 as a birthday present

Exercise 3: On a number line, negative numbers are located right or left of zero? And positive numbers? Where would -3 be located?

Exercise 4: Place these integers on the number line: -6, 8,-9, 0,-2, 7, 5



Exercise 5: Classify the following numbers and place them on the number line:

$$5 \;;\; -3 \;;\; -7 \;;\; 0 \;;\; 9 \;;\; 2 \;;\; -15 \;;\; 11$$

Exercise 6: Order the following numbers from least to greatest:

a) $7 \;;\; -4 \;;\; 3 \;;\; 1 \;;\; -9 \;;\; 2 \;;\; -2 \;;\; -1$
b) $0 \;;\; -1 \;;\; -6 \;;\; 12 \;;\; 5 \;;\; -5 \;;\; 3 \;;\; -7$

Exercise 7: Place the $<$ or $>$ signs between the numbers, or the numbers between the given signs.

a) $-5 \quad 7$
b) $3 \quad -4$
c) $-3 \quad 1$
d) $-10 \quad -5$
e) $-5 < \quad < -1$
f) $-7 < \quad < 4$
g) $-4 < \quad < \quad < -2$
h) $-8 < \quad < -10$

Exercise 8: Work out:

a) $-2-8=$
b) $-5+2=$
c) $9-12=$
d) $7-8=$
e) $13-17=$
f) $-10-15=$
g) $7-11=$
h) $-2-5=$
i) $-9+1=$

Exercise 9: Work out the value of the following expressions:

a) $-5+7+5-3-2-1+10-9=$
b) $8-3-1+4+3-5+2-10=$
c) $-4-5+2-3+9+1-4+7=$
d) $-5+7-2-3+4-8+1-6=$
e) $4-2+7-9-1+5-4+2=$
f) $-3+7+2-9-4+5-1=$

Exercise 10: Work out the value of the following expressions:

a) $8-4-3+2-1+5-3-2+5+4=$
b) $8-2+4-3+5-10-4=$
c) $-3+7-8-2+4+1-10=$
d) $-5-9+3+2-4-1+3-7=$
e) $-2+7-4+8+3-1-11=$
f) $3-1+5+6-9-7+10=$

Exercise 11: Work out the value of the following expressions:

a) $-3\cdot(-6)=$
b) $(+2)\cdot(-4)=$
c) $(-35):(-7)=$
d) $12:(-4)=$
e) $-5\cdot(+6)=$
f) $-18:9\cdot(-1)=$
g) $10:(-2):(-5)=$
h) $(-1)^7=$
i) $(-2)^4=$

Exercise 12: Work out the value of the following expressions:

a) $3+(-5)=$
b) $5-(-8)=$
c) $-7-(-7)=$
d) $-(+10)+(-14)=$
e) $-(+3)+(-7)=$
f) $-(-4)+(-3)-(+2)=$
g) $(-8)-(-4)+(-6)=$
h) $(+7)-(+5)-(-9)=$
i) $-(+7)-(-4)+(+3)=$

Exercise 13: Work out the value of the following expressions:

a) $-3+7+1-8+3-4+5-9=$
b) $(+5)-(-3)-(+2)+(-7)=$
c) $(3-5)-(4-9)+(10-8)-(6-1)=$
d) $-2\cdot(-5)-3\cdot(-4)=$
e) $3+7\cdot(5-6)-(2-10):(+4)=$
f) $-7-4:(-2)+5\cdot(-3)=$
g) $(-2)\cdot(5-8)-(-3)\cdot(8-6)=$
h) $-10:5+4\cdot(-2)-15:(-3)-(-1)=$

Exercise 14: Work out the value of the following expressions:

a) $7-(-10):5-(-4)\cdot(-3)=$
b) $5\cdot(-3)-10:(-2)+4\cdot(-5)=$
c) $8\cdot(-3)+7\cdot(-5)+36:(+6)=$
d) $(-12):4-(-16):8=$
e) $10-(-20):10+2\cdot(-6)=$
f) $18:(-9)-(-3)\cdot(-2)+5\cdot3=$
g) $(+2)\cdot(-7+3)-5\cdot(8-6)\ =$
h) $3-2\cdot(7-4)-3\cdot(6-9)=$

Exercise 15: Work out the value of the following expressions:

a) $5-3\cdot(-2)+12:(-6)=$
b) $-(7-4\cdot3)-(-5)\cdot2+(-3)^2=$
c) $8-15:(-3)-(-2)\cdot(-4)=$
d) $-5+28:(-4)-3\cdot(-5)+(-2)^3=$
e) $-5+2\cdot(-4)-9:(-3)-(-2)^4=$
f) $-(7-3\cdot5)+8-(-3)\cdot(-5)-10:(-2)=$

Exercise 16: A shark was swimming 80 feet below sea level. If it ascends 25 feet, where is the shark now?

Exercise 17: In Zamora the temperature was -2°C in the evening. If the temperature dropped 9°C during the night, what is the temperature now?

Exercise 18: John has €40 in his bank account. He writes a check for €65. How much money does he have now?

Exercise 19: Maggie owes the candy store $35. Each of her five friends will help her pay off her debt. How much will each friend pay?

Exercise 20: A research team aboard a submarine descends 1500 feet beneath the surface of the water. They then rise 525 feet and descend again 350 feet. Where are they?

Exercise 21: The highest recorded temperature on Earth was recorded in Death Valley, California, at 134°F, while the lowest was -129°F in Antarctica. What is the range of temperatures recorded on Earth?

Exercise 22: Yesterday morning I had €10. My mom gave me €5 and I found a €10 bill when I got down the street. I went shopping and I bought a sweater, €20, and a T-shirt, €9. How much money do I have now?

Exercise 23: Jenny got out of her house on the fourth floor and went up three floors to visit her mother. Then she went down seven floors to say hello to her friend Monica and another three floors to get her car and go to work. Where is the car?

Exercise 24: Mount Everest, the highest elevation in Asia, is 29028 feet above sea level. The Dead Sea, the lowest elevation, is 1312 feet below sea level. What is the difference between these two elevations?

Exercise 25:

a) Will has a hot dog stand. Last week he spent €135 for hot dogs and supplies and he earned €250. What was his profit?

b) This week Will spent €172 for supplies and he earned €159. Did he make or lose any money this week?

Exercise 26: Roman Civilization began in 509 b. C. and ended in 476 a. C. How long did Roman Civilization last?

Exercise 27: A man was born on the year 42 b. C. and died on the year 27 a. C. How old was he when he died?

Exercise 27: Pythagoras was born around the year 569 b. C y and died on the year 475 b. C. How old was he when he died?

Exercise 28: A waiter has a salary of 1200€ per month. He has to pay a 540€ mortgage, a 39€ phone bill, 325€ for the car monthly payment and he spends about 300€ on food and clothes. Can he save any money?

Exercise 29: A submarine is 25m below the sea surface. It goes down three times, 60m each time, and then it goes up 15m. Where's the submarine in the end?

Exercise 30: Peter has a 20€ bill. He buys a T-shirt that costs 12€, and since he's hungry he decides to eat some fast food and gets a burger and a soda, 5€ both, and a bag of candy, 2€. When he gets out of the mall he finds a 5€ bill on the floor and decides to go back and buy a cover for his phone, that costs 7€. How much money does he have left?