Plot the two points on the number line. Find the distance between the two points.

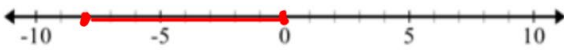1. Plot −7 and 4

Distance = 11

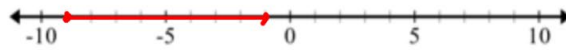2. Plot 5 and − 2

Distance = 7
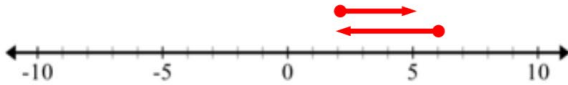
3. Plot 0 and − 8

Distance = 8

4. Plot −1 and − 9

Distance = 8

Model the situation on the number line. Write an expression and solve it. Label your answer.

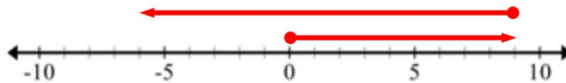4. Terry has $6. He spends $4 on candy and then gets $5 in allowance. How much money does he have?

Model:

Expression: 6 − 4 + 5

Answer: ⑦

5. A treasure map says "take 9 steps right, then 15 steps left". Where are you in relation to where you started?
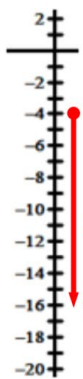
Model:

Expression: 9 − 15

Answer: − 6

6. A submarine is 4 meters underwater. The sub dives 12 meters down to look at a fish. The sub then rises 5 meters toward the surface. How deep is the sub?

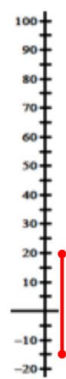Model: Expression:

−4 + (−12) + 5

or

−4 − 12 + 5

Answer:

− 11 meters

7. The temperature in the afternoon is 20°F. At the midnight the temp is −15°F. How much did the temperature change?

Model: Expression:

20 − (−15)

Answer:
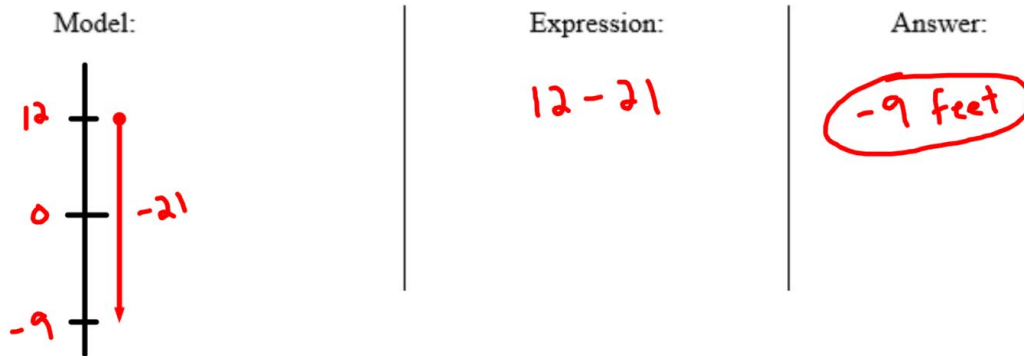
35°

Protons have a positive charge and electrons have a negative charge. Fill in the table below.

8.

Name of Ion	Proton Charge	Electron Charge	Ion Charge
Ion #1	+5	−3	+2
Ion #2	+6	−9	−3
Ion #3	+6	−4	+2
Ion #4	+4	−4	0
Ion #5	+8	−6	+2

Create a model of the situation. Write an expression and solve it. Label your answer.

9. A diver climbs up the high dive 12 feet. She jumps off the board and goes down 21 feet into the pool below. How deep into the water did the dive go?

Model:

$12 - 21$

Expression:

Answer:

-9 feet

Write an expression for each situation and solve it. Label your answer.

10. Brandi owes her mom $30. She pays back $10 but then has to borrow 15 more dollars. How much does she owe her mom?

$-30 + 10 - 15$

-35 dollars

11. Ashleigh is on a quiz show where correct answers earn you 8 points and wrong answers cost you 4 points. Ashleigh has 24 points and answers a question wrong. She then gets 2 questions in a row correct. How many points does she have?

$24 - 4 + 8 + 8$

36 points

12. A river is usually 8 feet deep. After a rain the water level increased 3 feet. The next day, the water level dropped 6 feet. What is the depth of the water?

$8 + 3 - 6$

5 feet