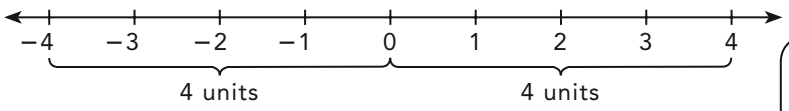
Name: _____ Date: _____

Lesson 2.2 Absolute Value

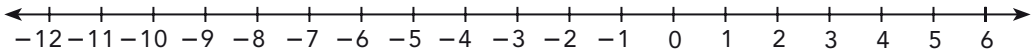
Use the number line to find the absolute value of each of the following numbers.

Example



$|-4| =$ 4 $|4| =$ 4

4 is 4 units from 0. −4 is also 4 units from 0. 4 is the **absolute value** of 4 and −4.



1. $|-12| =$ _____ **2.** $|-7| =$ _____ **3.** $|4| =$ _____

4. $|-10| =$ _____ **5.** $|6| =$ _____ **6.** $|-5| =$ _____

Write the absolute value of each number.

7. $|23| =$ _____ **8.** $|-81| =$ _____ **9.** $|-62| =$ _____

10. $|39| =$ _____ **11.** $|-58| =$ _____ **12.** $|-72| =$ _____

Complete each inequality using > or <.

Example

$|-3|$ [>] $|1|$ $|-40|$ [>] $|-37|$ $|171|$ [<] $|-200|$

13. $|-9|$ [ ] $|10|$ **14.** $|-96|$ [ ] $|-75|$ **15.** $|600|$ [ ] $|-200|$

16. $|-72|$ [ ] $|69|$ **17.** $|-572|$ [ ] $|-197|$ **18.** $|-811|$ [ ] $|910|$

Name: _____ Date: _____

Answer the questions.

Example

The table shows the temperature of four cities on a particular day in December.

City	A	B	C	D
Temperature	−6°C	−10°C	−25°C	−2°C

a) Which city had the highest temperature? City D

b) Which city had the lowest temperature? City C

c) How many degrees Celsius below zero were recorded for City A? 6°C

d) What is the difference in temperature between City C and City B?

$|-25| + |-10| = 35°C$

19. The table shows the temperature of four cities on a particular day in November.

City	Minnesota	Chicago	Houston	New York
Temperature	−3°C	−8°C	12°C	3°C

a) Which city had the highest temperature?

_____

b) Which city had a temperature of 3°C below zero?

_____

c) Which city had a temperature greater than New York's?

_____

d) What was the difference in temperature between Chicago and Houston?

_____

Name: _____ Date: _____

20. Alice is standing on a hill, which is 315 feet above sea level. Justin is standing on the ground which is 78 feet above sea level. A whale is swimming in the sea at 10 feet below sea level. A turtle is found 1,340 feet below sea level.

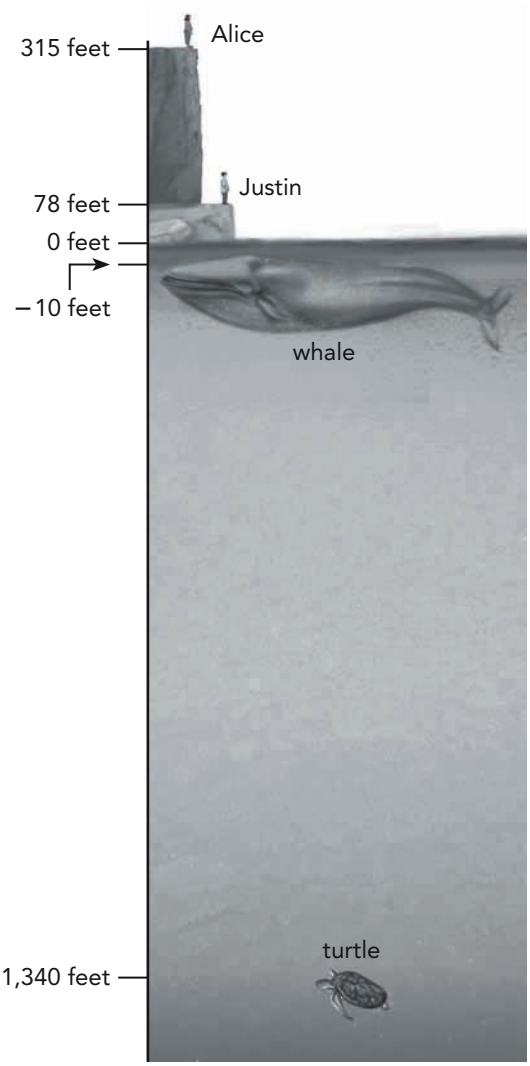
a) Use positive and negative numbers to represent the locations, with respect to sea level, of Alice, Justin, the whale, and the turtle.

Alice's position = _____

Justin's position = _____

The whale's position = _____

The turtle's position = _____



b) Who is closest to sea level?

Elevation of Alice

= _____

Elevation of Justin

= _____

Elevation of the whale

= _____

Elevation of the turtle

= _____

_____ is nearest to sea level.

c) Who is less than 500 feet below sea level?

_____

d) How far is Justin from the whale?

_____

Name: _____ Date: _____

21. The elevation of three oceans is shown in the table.

Ocean	Elevation (Below Sea Level)
Pacific Ocean	−4,028 meters
Indian Ocean	−3,890 meters
Arctic Ocean	−1,038 meters

a) Which ocean is closest to sea level?

_____

b) Which oceans are deeper than 2,000 meters below sea level?

_____

c) What is the difference in depth between the Pacific Ocean and the Arctic Ocean?

_____

22. The table shows the bank account statements of Brandon from January to April. Complete the table.

Month	Deposit	Withdrawal	Balance
January	$200		$200
February		$80	$120
March		$150	−$40
April	$10		−$30

a) In which months did Brandon overdraw his account?

_____

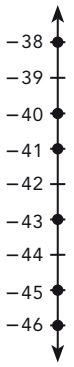
b) In which months did his bank account have a positive balance?

_____

c) If Brandon deposited $50 in May, what was the May balance?

_____

27.



28.

29. −10
30. 15
31. −87
32. 62
33. 138
34. −251
35. <
36. >
37. >
38. <
39. >
40. <
41. <
42. <
43. >
44. >
45. >
46. <
47. <
48. <
49. >
50. >
51. <
52. >
53. −1,600 meters > −2,100 meters
54. −20 > −30
55. $230 > −$610
56. 20°C > −30°C
57. −12,800 feet < −10,650 feet
58. $138 > −$50
59. A debit of $190 is less than a debit of $148.
60. −9°C is colder than −6°C.
61. An elevation of −7,500 feet is greater than an elevation of −9,300 feet.
62. A debit of $900 is less than a debit of $500.
63. −1°C is warmer than −12°C.

Lesson 2.2

1. 12
2. 7
3. 4
4. 10
5. 6
6. 5
7. 23
8. 81
9. 62
10. 39
11. 58
12. 72
13. <
14. >
15. >
16. >
17. >
18. <
19. **a)** Houston
b) Minnesota
c) Houston
d) 20°C
20. **a)** Alice's position = 315 feet
Justin's position = 78 feet
The whale's position = −10 feet
The turtle's position = −1,340 feet
b) Elevation of Alice = 315 feet above sea level
Elevation of Justin = 78 feet above sea level
Elevation of the whale = 10 feet below sea level
Elevation of the turtle = 1,340 feet below sea level
The whale is nearest to the sea level.
c) The whale
d) 88 feet
21. **a)** Arctic Ocean
b) Pacific Ocean and Indian Ocean
c) 2,990 meters
22. **a)** March and April
b) January and February
c) 20 dollars

Chapter 3

Lesson 3.1

1. $3\frac{3}{5}$
2. $4\frac{1}{2}$
3. $3\frac{7}{9}$
4. $\frac{25}{6}$
5. $\frac{37}{7}$
6. $\frac{75}{8}$
7. $\frac{8}{63}$
8. 8
9. $13\frac{1}{3}$
10. $3 \div \frac{1}{8} = \underline{3} \times \underline{8}$
$= \underline{24}$
11. $7 \div \frac{1}{6} = \underline{7} \times \underline{6}$
$= \underline{42}$
12. $8 \div \frac{1}{5} = \underline{8} \times \underline{5}$
$= \underline{40}$