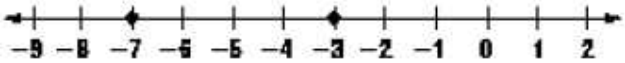
Print

Chapter 11 - Integers and Transformations - Mid-Chapter Quiz: Lessons 11-1 through 11-4

Replace each ● with < or > to make a true sentence.

1. –7 ● –3

Graph –7 and –3 on a number line. Then compare.

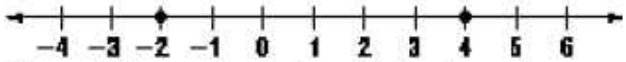


Since –7 is to the left of –3, –7 < –3.

<

2. 4 ● –2

Graph 4 and –2 on a number line. Then compare.

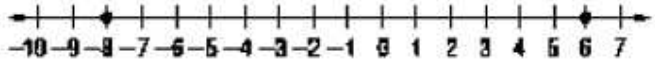


Since 4 is to the right of –2, 4 > –2.

>

3. –8 ● 6

Graph –8 and 6 on a number line. Then compare.

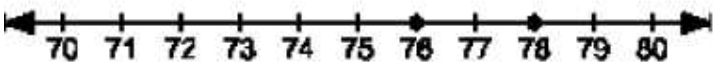


Since –8 is to the left of 6, –8 < 6.

<

4. 78 ● 76

Graph 78 and 76 on a number line. Then compare.



Since 78 is to the right of 76, 78 > 76.

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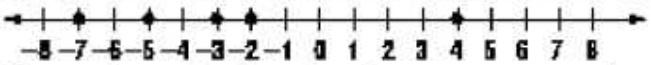
5. Order –5, –7, 4, –3, and –2 from greatest to least.

Graph –5, –7, 4, –3, and –2 on a number line.

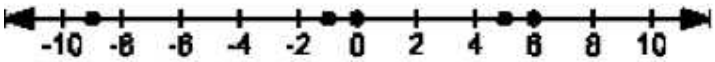


Since the order is to be from greatest to least, write the integers as they appear on the number line from right to left. The order from greatest to least is 4, –2, –3, –5, and –7.

4, –2, –3, –5, –7

6. Order 0, –9, 6, –1, and 5 from least to greatest.

Graph 0, –9, 6, –1, and 5 on a number line.



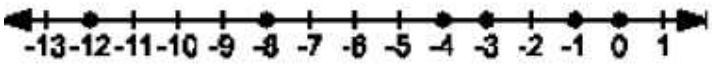
Since the order is to be from least to greatest, write the integers as they appear on the number line from left to right. The order from least to greatest is –9, –1, 0, 5, and 6.

–9, –1, 0, 5, 6

7. **GOLF** In golf, the lowest score wins. The table shows the scores relative to par of the winners of the U.S. Open from 2000 to 2007. What was the lowest winning score?

Year	Winner	Score
2007	Angel Cabrera	+5
2006	Geoff Ogilvy	+5
2005	Michael Campbell	even
2004	Retief Goosen	–4
2003	Jim Furyk	–8
2002	Tiger Woods	–3
2001	Retief Goosen	–4
2000	Tiger Woods	–12

Graph the scores on a number line. Even corresponds to 0.



The lowest winning score is the least integer, so look for the leftmost integer. The winning score is –12.

–12

Add. Use counters or a number line if necessary.

8. $+8 + (-3)$

$+8 + (-3) = 5$

5

9. $-6 + 2$

$-6 + 2 = -4$

–4

10. $-4 + (-7)$

$$-4 + (-7) = -11$$

-11

11. **ALGEBRA** Evaluate $x + y$ if $x = 7$ and $y = -12$.

$$x + y = 7 + (-12)$$
$$= -5$$

-5

12. **MULTIPLE CHOICE** A mole is in a burrow 12 inches below ground. It digs down 2 more inches. Which addition sentence represents the situation?

A $12 + (-2)$
B $-12 + 2$
C $-12 + (-2)$
D $12 + 2$

Depth is represented by negative integers. So the addition sentence that represents the situation is $-12 + (-2)$.
The answer is C.

C

Subtract. Use counters if necessary.

13. $9 - (+3)$

$$9 - (+3) = 9 + (-3)$$
$$= 6$$

6

14. $-3 - 5$

$$-3 - 5 = -3 + (-5)$$
$$= -8$$

-8

15. $8 - (-2)$

$$8 - (-2) = 8 + 2$$
$$= 10$$

10

16. $-4 - (-7)$

$$-4-(-7)=-4+7$$
$$=3$$

3

17. **ALGEBRA** Evaluate $g-h$ if $g=-2$ and $h=-6$.

$$g-h=-2-(-6)$$
$$=-2+6$$
$$=4$$

4

18. **MULTIPLE CHOICE** In Antarctica the temperature can be –8°F with a wind chill of –32°F. Find the difference between the temperature and the wind chill temperature.
F –40
G –24
H 24
J 40

$$-8-(-32)=-8+32$$
$$=24$$
The answer is H.

H

Multiply.

19. $-4 \times (-7)$

$$-4\times(-7)=28$$

28

20. $6(-9)$

$$6(-9)=-54$$

–54

21. 8×2

$$8\times 2=16$$

16

22. $-7(10)$

$$-7(10)=-70$$

–70

23. **ELEVATORS** An elevator descends at a rate of 15 feet per second. Write an integer to represent the change in the position of the elevator after 20 seconds?

$-15(20) = -300$

The integer –300 represents the change in position of the elevator.

–300 ft

24. **DISTANCE** The table shows the number of yards a cyclist traveled. If the cyclist continues at the same rate, how many yards will she have traveled after four minutes?

Minutes	Distance (yd)
1	360
2	720
3	1,080
4	■

$360(1) = 360$

$360(2) = 720$

$360(3) = 1,080$

$360(4) = 1,440$

After four minutes she will have traveled 1,440 yards.

1,440 yd

25. **SCIENCE** For each kilometer above Earth's surface, the temperature decreases 7°C. If the temperature at Earth's surface is 0°C, what will the temperature be 2 kilometers above the surface?

$= 0 + (-7)(2)$

$= 0 + -14$

$= -14°C$

–14°C