

Melani Situmorang  
Professor In Hak Moon  
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### **Chapter 6.1**

#### **Select the lesser of the two given numbers**

42. -9, -14

**Answer:**

$$-9 > -14$$

Because -9 is greater than -14.

44. -15, -16

**Answer:**

$$-15 > -16$$

Because -15 is greater than -16.

46. 5,  $|-2|$

**Answer:**

$$5 = 5$$

$$|-2| = 2$$

So,  $5 > 2$ , because 5 is greater than 2.

48.  $|-8|$ ,  $|-9|$

**Answer:**

$$|-8| = 8$$

$$|-9| = 9$$

So,  $8 < 9$ , because 8 is less than 9.

50.  $-|-2|$ ,  $-|-3|$

**Answer:**

$$-|-2| = -2$$

$$-|-3| = -3$$

So,  $-2 > -3$ , because -2 is greater than -3.

52.  $|7 - 2|$ ,  $|8 - 1|$

**Answer:**

$$|7 - 2| = |5| = 5$$

$$|8 - 1| = |7| = 7$$

So,  $5 < 7$ , because 5 is less than 7.

**Decide whether each statements true or false**

$$54. -8 > -(-2)$$

**Answer:**

$$-8 = -8$$

$$-(-2) = 2$$

means  $-8 > 2$ , which is **false** because  $-8$  is less than  $2$ . It's **supposed to be  $-8 < 2$** .

$$56. -6 \leq -(-3)$$

**Answer:**

$$-6 = -6$$

$$-(-3) = 3$$

means  $-6 \leq 3$ , which is **true** because  $-6$  is less than or equal to  $3$ .

$$58. |-12| < |-20|$$

**Answer:**

$$|-12| = 12$$

$$|-20| = 20$$

means  $12 < 20$ , which is **true** because  $12$  is less than  $20$ .

$$60. -|12| > |-15|$$

**Answer:**

$$-|12| = -12$$

$$|-15| = 15$$

means  $-12 > 15$ , which is **false** because  $-12$  is less than  $15$ . It **should be  $-12 < 15$** .

$$62. -|-12| \leq -|-15|$$

**Answer:**

$$-|-12| = -12$$

$$-|-15| = -15$$

means  $-12 \leq -15$ , which is **false** because  $-12$  is greater than or equal to  $-15$ . **It should be  $-12 \geq -15$**

$$64. |13 - 8| \leq |7 - 4|$$

**Answer:**

$$|13 - 8| = |5| = 5$$

$$|7 - 4| = |3| = 3$$

means  $5 \leq 3$ , which is false because  $5$  is greater than or equal to  $3$ . **It should be  $5 \geq 3$** .