|  |  |  |  |
| --- | --- | --- | --- |
| Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  |  | http://www.edhelperclipart.com/clipart/edhelp1.gif | Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  |

**Inequalities**

**Use substitution to determine whether the value given for the variable makes the inequality true or false.**

**SHOW YOUR WORK!! (NO WORK SHOWN = NO CREDIT!)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|

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| --- | --- | --- | --- | --- | --- | --- |
| 1.   |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 15 |   -   | m |   http://www.edhelperclipart.com/clipart/mathge.jpg   | 4 |

 *if m* = 11 |

 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 2.   |

|  |  |  |  |
| --- | --- | --- | --- |
| 15 |   http://www.edhelperclipart.com/clipart/mathle.jpg   |

|  |
| --- |
| ahttp://www.edhelperclipart.com/clipart/fractdiv2.gif10 |

 |

*if a* = 153 |

 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 3.   |

|  |  |  |  |
| --- | --- | --- | --- |
| 8 |   >   |

|  |
| --- |
| 64http://www.edhelperclipart.com/clipart/fractdiv2.gifr |

 |

 *if r* = 16 |

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|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 4.   |

|  |  |  |
| --- | --- | --- |
| 76 |   http://www.edhelperclipart.com/clipart/mathge.jpg   | 19h |

if *h* = 4 |

 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 5.   |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 22 |   <   | 19 |   +   | q |

if *q* = 5 |

 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 6.   |

|  |  |  |
| --- | --- | --- |
| 124 |   http://www.edhelperclipart.com/clipart/mathle.jpg   | 15z |

if *z* = 5 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 7.   |

|  |  |  |
| --- | --- | --- |
| 2v |   >   | 24 |

if *v* = 12 |

 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 8.   |

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |
| --- |
| nhttp://www.edhelperclipart.com/clipart/fractdiv1.gif5 |

 |   <   | 16 |

*if n* = 57 |

 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 9.   |

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |
| --- |
| 72http://www.edhelperclipart.com/clipart/fractdiv2.gife |

 |   <   | 12 |

if *e* = 17 |

 |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 10.   |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 29 |   -   | u |   http://www.edhelperclipart.com/clipart/mathge.jpg   | 9 |

if *u* = 20 |

 |

|  |  |
| --- | --- |
| 11.   | a + 16 > 30if a = 14 |

 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 12.   |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 38 |   >   | 32 |   +   | z |

if *z* = 13 |

 |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 13.   |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 16 |   -   | j |   <   | 3 |

if *j* = 13 |

 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 14.   |

|  |  |  |
| --- | --- | --- |
| 21 |   http://www.edhelperclipart.com/clipart/mathge.jpg   | 7r |

if *r* = 3 |

 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 15.   |

|  |  |  |
| --- | --- | --- |
| 10h |   http://www.edhelperclipart.com/clipart/mathle.jpg   | 62 |

if *h* = 11 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 16.   |

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |
| --- |
| 30http://www.edhelperclipart.com/clipart/fractdiv2.gifk |

 |   http://www.edhelperclipart.com/clipart/mathle.jpg   | 6 |

if *k* = 3 |

 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 17.   |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 28 |   +   | d |   >   | 37 |

if *d* = 6 |

 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 18.   |

|  |  |  |  |
| --- | --- | --- | --- |
| 17 |   http://www.edhelperclipart.com/clipart/mathge.jpg   |

|  |
| --- |
| whttp://www.edhelperclipart.com/clipart/fractdiv1.gif4 |

 |

if *w* = 78 |

 |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 19.   |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 15 |   http://www.edhelperclipart.com/clipart/mathle.jpg   | 22 |   -   | g |

if *g* = 19 |

 |

|  |  |
| --- | --- |
| 20.   | 18r < 198if r = 12 |

 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 21.   |

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |
| --- |
| ehttp://www.edhelperclipart.com/clipart/fractdiv1.gif7 |

 |   <   | 10 |

if *e* = 22 |

 |

**Write the inequality represented by each graph below:**

 22) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-1 0 1 2 3 4 5

6 7 8 9 10 11

25 26 27 28 29 30

0 10 20 30 40 50

 23) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 24) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 25) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Write the inequality AND graph for each problem below:**

26 ) Mrs. Ledesma’s oldest son will spend more than 10 hours snapchatting with his girlfriend this weekend.

27) Daniella pushed her baby doll around in its stroller for at least 20 minutes yesterday.

28) The temperature is supposed to be below 40⁰ Friday night.

29) No more than 30 people came to my mom’s house for Thanksgiving dinner.

30) Christmas break will be less than 15 days this year.