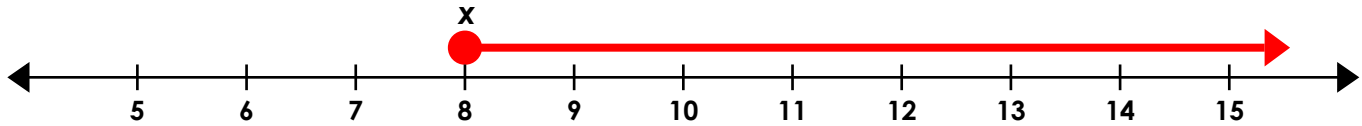Name: _____   Single Variable

Inequalities

An inequality is a pair of expressions or numbers that are not equal.

When you solve an inequality, you need to show all of the values that make the statement true. One way to do this is by graphing the inequality on a number line.

examples: **x ≥ 8** (x is greater than or equal to 8)

x

```
←————┼————┼————┼———●————┼————┼————┼————┼————┼————┼————→
     5    6    7    8    9   10   11   12   13   14   15
```

On an inequality graph, an **open circle** is used for *greater than* and *less than*. A **filled circle** is used for *greater than or equal to* and *less than or equal to*.

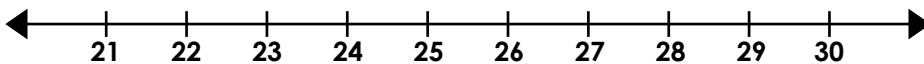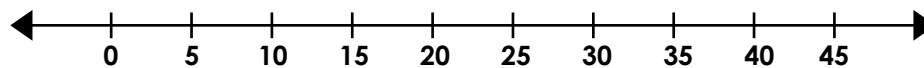**Write each inequality in words. Then graph each on the number line using a red colored**

```
          30   31   32   33   34   35   36   37   38   39   40
```

3.   24 > f   word form: _____
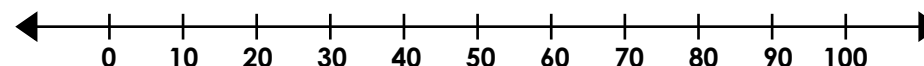
```
←————┼————┼————┼————┼————┼————┼————┼————┼————┼————┼————→
     21   22   23   24   25   26   27   28   29   30
```

4.   20 < t   word form: _____

```
←————┼————┼————┼————┼————┼————┼————┼————┼————┼————┼————→
     0    5   10   15   20   25   30   35   40   45
```

5.   u ≥ 30   word form: _____

```
←————┼————┼————┼————┼————┼————┼————┼————┼————┼————┼————→
     0   10   20   30   40   50   60   70   80   90  100
```

Inequalities

Write the inequality shown by each number line.

6.

w

10 11 12 13 14 15 16 17 18 19 20

answer: _____

7.

r

15 16 17 18 19 20 21 22 23 24 25

answer: _____

8.

m

0 10 20 30 40 50 60 70 80 90 100

answer: _____

9.

h

200 300 400 500 600 700 800 800

answer: _____
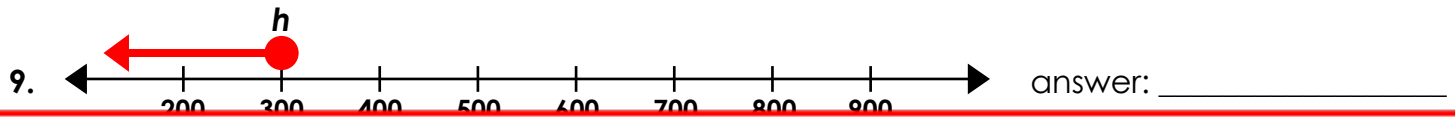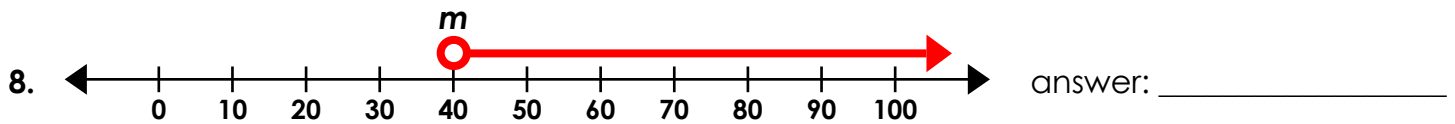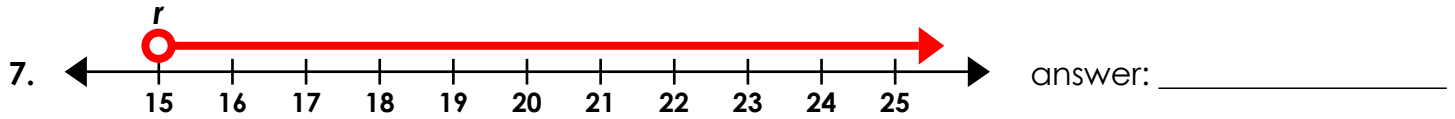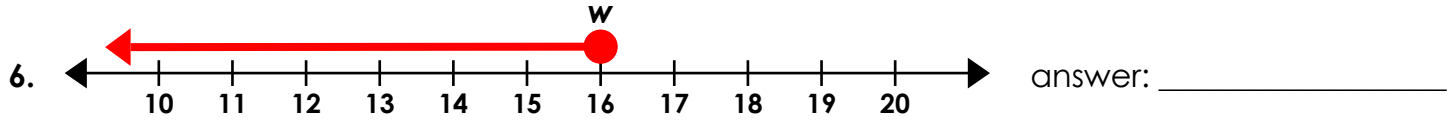
~PREVIEW~

Please log in or register to download
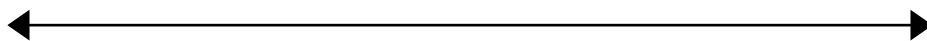the printable version of this worksheet.

12. For the inequality $c \geq 76$, Tami says 80 and 100 are both solutions. Is she correct? Explain why or why not.

_____

_____

13. For the inequality $12 > d$, Jarod says 9 and 12 are both solutions. Is he correct? Explain why or why not.

_____

_____

14. Levi spends up to $15 per week on lunches. Show this inequality on a number line.
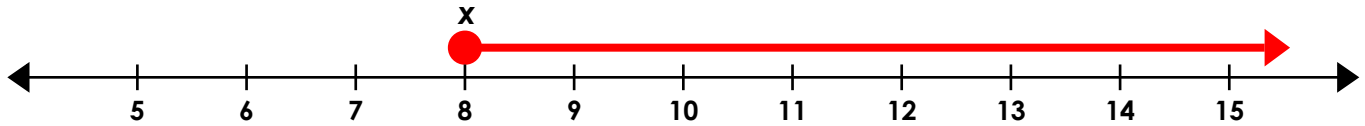
Inequalities

An inequality is a pair of expressions or numbers that are not equal.

When you solve an inequality, you need to show all of the values that make the statement true. One way to do this is by graphing the inequality on a number line.

examples: **$x \geq 8$** (x is greater than or equal to 8)

x

| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

On an inequality graph, an **open circle** is used for *greater than* and *less than*. A **filled circle** is used for *greater than or equal to* and *less than or equal to*.

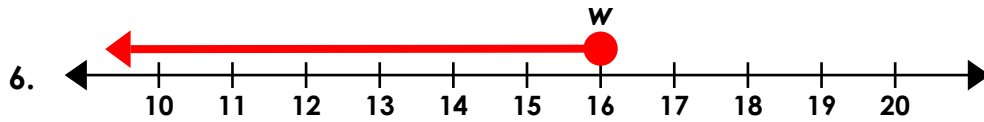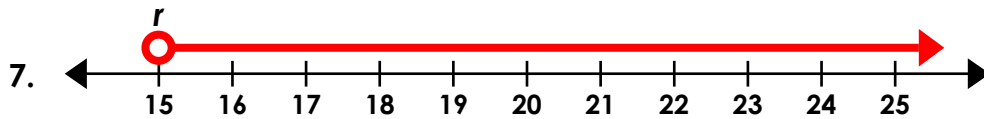~ P R E V I E W ~

Please log in or register to download the printable version of this worksheet.
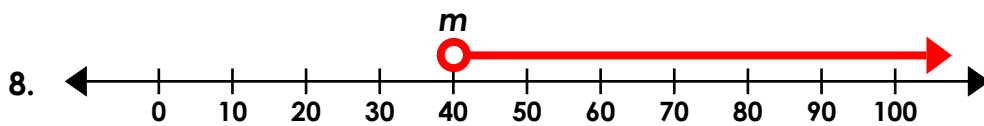
Inequalities

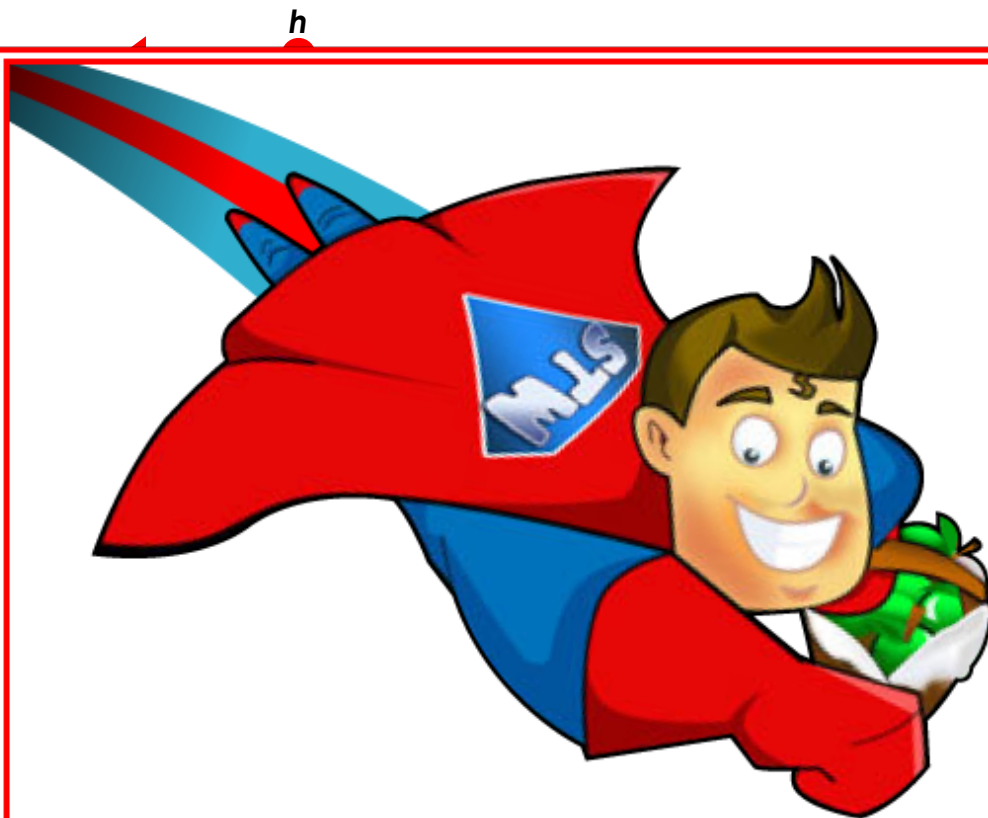**Write the inequality shown by each number line.**

6.

w

| | | | | | | | | | | |
|10|11|12|13|14|15|16|17|18|19|20|

answer: __$w \leq 16$ or $16 \geq w$__

7.

r

| | | | | | | | | | | |
|15|16|17|18|19|20|21|22|23|24|25|

answer: __$r > 15$ or $15 < r$__

8.

m

| | | | | | | | | | | |
|0|10|20|30|40|50|60|70|80|90|100|

answer: __$m > 40$ or $40 < m$__

h

~ PREVIEW ~

Please log in or register to download the printable version of this worksheet.