Name _____ Date _____

True and False Number Sentences

State when the following equations and inequalities will be true and when they will be false.

1. $5g > 45$

2. $14 = 5 + k$

3. $26 - w < 12$

4. $32 \leq a + 8$

5. $2 \cdot h \leq 16$

State when the following equations and inequalities will be true and when they will be false.

1. $36 = 9k$

2. $67 > f - 15$

3. $\frac{v}{9} = 3$

4. $10 + b > 42$

5. $d - 8 \geq 35$

6. $32f < 64$

7. $10 - h \leq 7$

8. $42 + 8 \geq g$

9. $\frac{m}{3} = 14$

State when the following equations and inequalities will be true and when they will be false.

1. $5g > 45$

   The inequality is true for any value of g that is greater than 9 and false when the value of g is less than or equal to 9.

   OR

   The inequality is true when $g > 9$ and false when $g \leq 9$.

2. $14 = 5 + k$

   The equation is true when the value of k is 9 and false when the value of k is any other number.

   OR

   The equation is true when $k = 9$ and false when $k \neq 9$.

3. $26 - w < 12$

   The inequality is true for any value of w that is greater than 14 and false when the value of w is less than or equal to 14.

   OR

   The inequality is true when $w > 14$ and false when $w \leq 14$.

4. $32 \leq a + 8$

   The inequality is true for any value of a that is greater than or equal to 24 and false when the value of a is less than 24.

   OR

   The inequality is true when $a \geq 24$ and false when $a < 24$.

5. $2 \cdot h \leq 16$

   The inequality is true for any value of h that is less than or equal to 8 and false when the value of h is greater than 8.

   OR

   The inequality is true when $h \leq 8$ and false when $h > 8$.

State when the following equations and inequalities will be true and when they will be false.

1. $36 = 9k$

   The equation is true when the value of k is 4 and false when the value of k is any number other than 4.

   OR

   The equation is true when $k = 4$ and false when $k \neq 4$.

2. $67 > f - 15$

   The inequality is true for any value of f that is less than 82 and false when the value of f is greater than or equal to 82.

   OR

   The inequality is true when $f < 82$ and false when $f \geq 82$.

3. $\frac{v}{9} = 3$

The equation is true when the value of v is 27 and false when the value of v is any number other than 27.

OR

The equation is true when $v = 27$ and false when $v \neq 27$.

4. $10 + b > 42$

The inequality is true for any value of b that is greater than 32 and false when the value of b is less than or equal to 32.

OR

The inequality is true when $b > 32$ and false when $b \leq 32$.

5. $d - 8 \geq 35$

The inequality is true for any value of d that is greater than or equal to 43 and false when the value of d is less than 43.

OR

The inequality is true when $d \geq 43$ and false when $d < 43$.

6. $32f < 64$

The inequality is true for any value of f that is less than 2 and false when the value of f is greater than or equal to 2.

OR

The inequality is true when $f < 2$ and false when $f \geq 2$.

7. $10 - h \leq 7$

The inequality is true for any value of h that is greater than or equal to 3 and false when the value of h is less than 3.

OR

The inequality is true when $h \geq 3$ and false when $h < 3$.

8. $42 + 8 \geq g$

The inequality is true for any value of g that is less than or equal to 50 and false when the value of g is greater than 50.

OR

The inequality is true when $g \leq 50$ and false when $g > 50$.

9. $\frac{m}{3} = 14$

The equation is true when the value of m is 42 and false when the value of m is any number other than 42.

OR

The equation is true when $m = 42$ and false when $m \neq 42$.