**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_\_\_\_\_**

**Solve Multi-Step Inequalities**

**Worksheet 355**

**Solve each inequality. Then check your solution.**

**1.** 11*y* + 13 ≥ –1 **2.** 8*n* – 10 < 6 – 2*n* **3.** $ \frac{q}{7}$ + 1 > –5

**4.**$ $ 6*n* + 12 < 8 + 8*n* **5.** $ $–12 – *d* > –12 + 4*d* **6.** 5*r* – 6 > 8*r* – 18

**7.** $\frac{-3x+6}{2}$ ≤ 12 **8.** 7.3*y* – 14.4 > 4.9*y* **9.** –8*m* – 3 < 18 – *m*

**10.** –4*y* – 10 > 19 – 2*y* **11.** 9*n* – 24*n* + 45 > 0 **12.** $\frac{4x-2}{5}$ ≥ –4

**Define a variable, write an inequality, and solve each problem. Then check your solution.**

**13.** Negative three times a number plus four is no more than the number minus eight.

**14.** One fourth of a number decreased by three is less than two.

**15.** The sum of twelve and a number is no greater than the sum of twice the number and –8.

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_\_\_\_\_**

**Solve Multi-Step Inequalities**

**Worksheet 356**

**Solve each inequality. Then check your solution.**

**1.** 2(*t* + 3) ≥ 16 **2.** 3(*d* – 2) – 2*d* > 16 **3.** 4*h* – 8 < 2(*h* – 1)

**4.** 6*y* + 10 > 8 – (*y* +14) **5.** 4.6(*x* – 3.4) > 5.1*x* **6.** –5*x* – (2*x* + 3) ≥ 1

**7.** 3(2*y* – 4) – 2(*y* + 1) > 10 **8.** 8 – 2(*b* + 1) < 12 – 3*b* **9.** –2(*k* – 1) > 8(1 + *k*)

**10.** 0.3(*y* – 2) > 0.4(1 + *y*) **11.** *m* + 17 ≤ –(4*m* – 13)

**12.** 3*n* + 8 ≤ 2(*n* – 4) – 2(1 – *n*) **13.** 2(*y* – 2) > –4 + 2*y*

**14.** *k* – 17 ≤ –(17 – *k*) **15.** *n* – 4 ≤ 0 – 3(2 + *n*)

**Define a variable, write an inequality, and solve each problem. Then check your solution.**

**16.** Twice the sum of a number and 4 less than 12.

**17**. Three times the sum of the number and six is greater than four times the number decreased by two

**18.** Twice the difference of a number and four is less than the sum of the number and five.