**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Per:\_\_\_\_\_\_\_\_\_\_\_**

**Solving Equations with Variables on Both Sides**

**Worksheet 164**

**Solve each equation, then check your solution.**

**1.**  5*x* – 3 = 13 – 3*x* **2.** −4*c* – 11 = 4*c* + 21 **3.** 1 – *s* = 6 – 6*s*

**4.** 14 + 5*n* = −4*n* + 17 **5.** $\frac{1}{2}k-3=2-\frac{3}{4}k$ **6.** $\frac{1}{2}\left(6-z\right)=z$

**7.** 3(−2 – 3*x*) = −9*x* – 4 **8.** 4(4 – *w*) = 3(2*w* + 2) **9.** $\frac{5}{2}t-t=3+\frac{3}{2}t$

**10.** 9(4*b* – 1) = 2(9*b* + 3) **11.** 3(6 + 5*y*) = 2(−5 + *y*) **12.** $\frac{2}{3}x-\frac{1}{6}=\frac{1}{2}x+\frac{5}{6}$

**13.** 6 + 2(3*j* – 2) = 4(1 + *j*) **14.** −5*x* – 10 = 2 – (*x* + 4) **15.** $\frac{1}{2}\left(3g-2\right)=\frac{g}{6}$

**16.** 1.4*f* + 1.1 = 8.3 – *f* **17.** $\frac{1}{9}\left(2m-16\right)=\frac{1}{3}(2m+4)$ **18.** $2-\frac{3}{4}z=\frac{1}{8}z+9$

**19.** $\frac{1}{3}\left(c+1\right)=\frac{1}{6}(3c-5)$ **20.** 2(*a* – 8) + 7 = 5(*a* + 2) – 3*a* – 19

**21.** 3(*d* – 8) – 5 = 9(*d* + 2) + 1 **22.** $\frac{1}{4}\left(5-2h\right)=\frac{h}{2}$

**23.** Two third of a number reduced by 11 is equal to 4 more than the number. Find the number.

**24.** Five times the sum of a number and 3 is the same as 3 multiplied by 1 less than twice the number. What is the number?

**25.** Tripling the greater of two consecutive even integers gives the same result as subtracting 10 from the lesser even integer. What are the integers?

**26.** The formula for the perimeter of a rectangle is *P* = 2*l* + 2*w*, where *l* is the length and *w* is the width. A rectangle has a perimeter of 24 inches. Find its dimensions if its length is 3 inches greater than the width.