How Am I Doing? Chapter 2 Test

After you take this test read through the Math Coach on pages 182–183. Math Coach videos are available via MyMathLab and YouTube. Step-by-step test solutions on the Chapter Test Prep Videos are also available via MyMathLab and YouTube. (Search “ TobeyBeginningAlg” and click on “Channels.”)

Solve for the variable.

1. \[3x + 5.6 = 11.6\]
2. \[9x - 8 = -6x - 3\]
3. \[2(2y - 3) = 4(2y + 2)\]
4. \[\frac{1}{7}y + 3 = \frac{1}{2}y\]
5. \[4(7 - 4x) = 3(6 - 2x)\]
6. \[0.8x + 0.18 - 0.4x = 0.3(x + 0.2)\]
7. \[\frac{2y}{3} + \frac{1}{5} - \frac{3y}{5} + \frac{1}{3} = 1\]
8. \[3 - 2y = 2(3y - 2) - 5y\]
9. \[5(20 - x) + 10x = 165\]
10. \[5(x + 40) - 6x = 9x\]
11. \[-2(2 - 3x) = 76 - 2x\]
12. \[20 - (2x + 6) = 5(2 - x) + 2x\]

In questions 13–17, solve for \(x\).

13. \[2x - 3 = 12 - 6x + 3(2x + 3)\]
14. \[\frac{1}{3}x - \frac{3}{4}x = \frac{1}{12}\]
15. \[\frac{3}{5}x + \frac{7}{10} = \frac{1}{3}x + \frac{3}{2}\]
16. \[\frac{15x - 2}{28} = \frac{5x - 3}{7}\]
17. \[\frac{2}{3}(x + 8) + \frac{3}{5} = \frac{1}{5}(11 - 6x)\]
18. Solve for \(w\). \(A = 3w + 2P\)
19. Solve for \(w\). \(\frac{2w}{3} = 4 - \frac{1}{2}(x + 6)\)
20. Solve for \(a\). \(A = \frac{1}{2}h(a + b)\)
21. Solve for \(y\). \(5ax(2 - y) = 3axy + 5\)
22. Solve for \(B\). \(V = \frac{1}{3}Bh\)

23. Use your result from question 22 to find the area of the base (\(B\)) of a pyramid if the volume (\(V\)) is 140 cubic inches and the height (\(h\)) is 14 inches.

Solve and graph the inequality.

24. \[3(x - 2) \geq 5x\]
25. \[2 - 7(x + 1) - 5(x + 2) < 0\]
26. \[5 + 8x - 4 < 2x + 13\]
27. \[\frac{1}{4}x + \frac{1}{16} \leq \frac{1}{8}(7x - 2)\]

Total Correct: 181