Answers to Significant Digit Worksheet:

Give the number of significant digits in each of the following measurements:

1.	**1 278.50**	**6**	7.	**8.002**	**4**	13.	**43.050**	**5**
2.	**12**0 000	**2**	8.	**823.012**	**6**	14.	0.**147**	**3**
3.	**90 027.00**	**7**	9.	0.00**5789**	**4**	15.	**6271.91**	**6**
4.	0.00**53567**	**5**	10.	**2.60**	**3**	16.	**6**	**1**
5.	**670**	**2**	11.	**542 000.**	**6**	17.	**3.47**	**3**
6.	0.00**730**	**3**	12.	**2 653 008.0**	**8**	18.	**387 465**	**6**

Round off the following numbers to three significant digits:

19. 120 000 = **1.20×10^5**
20. 5.457 = **5.46**
21. 0.0008769 = **0.000877** or **8.77×10^{-4}**
22. 4.53619 = **4.54**
23. 43.659 = **43.7**
24. 876 493 = **876 000** or **8.76×10^5**

Perform the following operations giving the proper number of significant figures in the answer.

25. 23.4 x 14 — 327.6 = **330** or **3.3×10^2**
26. 7.895 + 3.4 — 11.295 = **11.3**
27. 0.0945 x 1.47 — 0.138 915 = **0.139**
28. 0.005 - 0.0007 — 0.0043 = **0.004**
29. 7.895 / 34 — 0.232 205 882 = **0.23**
30. 0.2 / 0.0005 — 400 = **400**
31. 350.0 - 200 — 150 = **200**
32. 27.68 - 14.369 — 13.311 = **13.31**
33. 3.08 x 5.2 — 16.016 = **16**
34. 0.0036 x 0.02 — 0.000072 = **0.00007**
35. 4.35 x 2.74 x 3.008 — 35.852352 = **35.9**
36. 35.7 x 0.78 x 2.3 — 64.0458 = **64**
37. 3.76 / 1.62 — 2.320987654 = **2.32**
38. 0.075 / 0.030 — 2.5 = **2.5**
39. 65 000(0.08 x 200 x 0.004) / (800 x 300) — 0.01666666667 = **0.02**
40. [(11.34 – 9.63) / 11.34] × 100.00 — 15.079365079 = **15.1**
41. [(2.0265 – 2.02) / 2.0265] × 100.00 — 0.3207500617 = **0.3**

Converting between two sets of units never changes the number of significant figures in a measurement. Remember, data are only as good as the original measurement, and no later manipulations can clean them up.