

Significant Digit Worksheet:

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

- | | | |
|--------------|-----------------|--------------|
| 1. 1,278.50 | 7. 8.002 | 13. 43.050 |
| 2. 120,000 | 8. 823.012 | 14. 0.147 |
| 3. 90,027.00 | 9. 0.005789 | 15. 6,271.91 |
| 4. 0.0053567 | 10. 2.60 | 16. 6 |
| 5. 670 | 11. 542.000 | 17. 3.47 |
| 6. 0.00730 | 12. 2,653,008.0 | 18. 387,465 |

Round off the following numbers to three significant digits:

- | | |
|-----------------|---------------|
| 19. 120,000 = | 22. 4.53619 = |
| 20. 5.457 = | 23. 43.659 = |
| 21. 0.0008769 = | 24. 876,493 = |

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

25. 23.4×14
26. $7.895 + 3.4$
27. 0.0945×1.47
28. $0.005 - 0.0007$
29. $7.895 / 34$
30. $0.2 / 0.0005$
31. $(8.71 \times 0.0301) / 0.056 =$
32. $(7.6 \times 10^4) \times (5.823 \times 10^{-3}) =$
33. $(4 \times 972) + (76.4 \times 29.3) - (12 \times 7) =$
34. $\frac{(72.67 - 72.63) \times (4.2694)}{(9.72 + 0.01)} =$
35. $\frac{4.1 \times 10^{-3} - 6.9 \times 10^{-2}}{7.2 \times 10^{-6} + 8.943 \times 10^4} =$
36. $\frac{10,000,000 \times 0.0003845 \times 4.55}{4.331 \times 10^{-6}} =$

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. 120,000 | ambiguous | 8. 823.012 | 6 | 14. 0.147 | 3 |
| 3. 90,027.00 | 7 | 9. 0.005789 | 4 | 15. 6,271.91 | 6 |
| 4. 0.0053567 | 5 | 10. 2.60 | 3 | 16. 6 | 1 |
| 5. 670 | ambiguous | 11. 542.000 | 6 | 17. 3.47 | 3 |
| 6. 0.00730 | 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 | 22. 4.53619 = 4.54 |
| 20. 5.457 = 5.46 | 23. 43.659 = 43.7 |
| 21. 0.0008769 = 0.000877 or 8.77×10^{-4} | 24. 876 493 = 876,000 or 8.76×10^5 |

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

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|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| 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 = 4×10^2 |
| 31. $(8.71 \times 0.0301) / 0.056 =$ 4.7 | |
| 32. $(7.6 \times 10^4) \times (5.823 \times 10^{-3}) =$ 4.4×10^2 | |
| 33. $(4 \times 972) + (76.4 \times 29.3) - (12 \times 7) =$ 6×10^3 | |
| 34. $\frac{(72.67 - 72.63) \times (4.2694)}{(9.72 + 0.01)} =$ 0.02 | |
| 35. $\frac{4.1 \times 10^{-3} - 6.9 \times 10^{-2}}{7.2 \times 10^{-6} + 8.943 \times 10^4} =$ -7.3×10^{-7} | |
| 36. $\frac{10,000,000 \times 0.0003845 \times 4.55}{4.331 \times 10^{-6}} =$ 4×10^9 | |