

### Week-In-Review 5 on 3.2 – 3.3

1.  $2734_{\text{eight}} + 531_{\text{eight}} =$
2. Compute  $23 \cdot 17$  using two different algorithms other than the standard algorithm.
3.  $20010_{\text{three}} - 2022_{\text{three}} =$
4. The earth makes one complete orbit around the sun in 365 days, 5 hours, 48 minutes, and 46 seconds. Venus makes one complete orbit around the sun in 224 days, 16 hours, 56 minutes. How much longer is earth's orbit than Venus' orbit? Your answer should contain as few of each time unit as possible.
5.  $35_{\text{nine}} \cdot 28_{\text{nine}} =$
6. Explain what has actually been done in the following division problem.

$$\begin{array}{r} 8 \\ 5 \overline{) 437} \end{array}$$

$$\begin{array}{r} 8 \\ 5 \overline{) 437} \\ \underline{40} \phantom{0} \end{array}$$

$$\begin{array}{r} 8 \\ 5 \overline{) 437} \\ \underline{-40} \phantom{0} \\ 3 \end{array}$$

7.  $10010_{\text{two}} \div 11_{\text{two}} =$
8. Model  $31 - 26$  using illustrations of base-ten blocks clearly showing any regrouping/trading and the difference.
9. Compute  $37 + 69$  using the standard algorithm.
10. Show two algorithms other than the standard one for computing the difference  $203 - 67$ .
11.  $341_{\text{six}} + 354_{\text{six}} =$
12. Using scratch addition, compute  $57 + 94 + 88 + 65$ .
13. Use lattice multiplication to find  $2T5_{\text{eleven}} * T8_{\text{eleven}}$ .
14. Compute  $11001_{\text{two}} - 101_{\text{two}}$ , and check your answer by using addition.
15. Compute  $347 + 194$  using the expanded algorithm.
16. Model  $78 + 35$  using illustrations of base-ten blocks clearly showing any regrouping/trading and the sum.

17. Compute  $114 - 95$  using the standard algorithm. Check your answer by using addition.

18. Using illustrations of base-three blocks, model  $120_{\text{three}} + 21_{\text{three}}$  clearly showing any regrouping/trading and the sum.

19.  $T9E_{\text{twelve}} + 7TE_{\text{twelve}} =$

20. Show two algorithms other than the standard one for computing the quotient  $257 \div 12$ .

21. Justify each step.

$$\begin{aligned} 21 + 48 &= (2 * 10 + 1 * 1) + (4 * 10 + 8 * 1) \\ &= (2 * 10 + 4 * 10) + (1 * 1 + 8 * 1) \\ &= (2 + 4) * 10 + (1 + 8) * 1 \\ &= 6 * 10 + 9 * 1 \\ &= 69 \end{aligned}$$

22. Show two algorithms other than the standard one for computing the sum  $134 + 268$ .

23.  $302_{\text{four}} * 133_{\text{four}} =$

24. Use partial products to compute  $43 * 75$ .

25.  $4431_{\text{five}} \div 42_{\text{five}} =$

26. Use scratch addition to find  $65_{\text{seven}} + 134_{\text{seven}} + 202_{\text{seven}}$ .

27. Work out the following subtraction problem, show all steps, and explain in detail every number you write down.

$$\begin{array}{r} 104 \\ - 56 \\ \hline \end{array}$$

28. Use lattice multiplication to find  $235 * 984$ .

29. Using base-ten blocks, how would you model the division problem  $132 \div 11$ ?

30.  $12422_{\text{six}} \div 35_{\text{six}} =$

31. Compute  $60 \cdot 300$  by transforming it to an equivalent problem using multiplication by  $10^n$ .

32. Clearly indicate the product after computing  $16 \cdot 94$  using distributive property of multiplication over addition of whole numbers.

33. Make a (single-digit) base-seven multiplication-table.

34. a.  $4^5 * 4^2 * 4^7 =$   
b.  $9^5 + 4 * 9^5 =$

35. Amanda and Jennifer sold 48 student tickets to the play at \$3 each and 37 non-student tickets at \$5 each. Expenses for the play were \$300. What were the net earnings from the play?

36. Convert the numerals in the division problem to Hindu-Arabic, compute the quotient, and then give the answer in Roman numerals.

$\text{㊿}\cap\text{||||} \text{ (Egyptian)} \div \text{•••} \text{ (Mayan)}$

37. Use short division (use only on single-digit divisors) to compute  $1880 \div 8$ .