

DEV 084 Skill Review Packet

This Skill Review Packet contains a small sample of the skills and concepts that are covered in DEV 084.

Completing the problems in this packet is one way for you to practice your math skills so that you can experience success in your next math class.

You can download additional worksheets from the Tutoring and Learning Center website (tlc.sinclair.edu).

Keep in mind that reviewing math every day will help you remember the information presented in DEV 084.

The following concepts and skills are covered in this Skill Review Packet:

- Whole Numbers
- Fractions
- Decimals

Directions: Do the Diagnostic Test. See what your areas of strength and weakness are. Concentrate on your weaker areas, but review all the areas for the best practice. Check your answers at the back of the packet. Review any skills that continue to be difficult for you.

If more practice is needed, additional worksheets and information can be found at the Tutoring and Learning Center in the Sinclair Library (TLC website address: tlc.sinclair.edu). You can also drop in for one-on-one tutoring.

Of course, you can also refer to your textbook, handouts, and practice tests from your DEV 084 course to help you with your review. The more you review and practice, the more likely it will be that you will remember what you have learned and be successful in future math classes.

Diagnostic Test

Directions: Try the following problems (1 – 60) and check them with the answer key provided at the end of this Skill Review Packet. How you do on this Diagnostic Test can show you what areas you need to review most: Whole Numbers, Fractions, or Decimals. For the best practice, it is useful to review all the sections.

WHOLE NUMBERS

Section 1: Place Value and Rounding

For the number 126, 783, identify the place value and round as follows:

- 1) The 2 is in what place? _____
- 2) The 7 is in what place? _____
- 3) Write out the number in words: _____
- 4) Round to the nearest ten: _____
- 5) Round to the nearest hundred; _____
- 6) Round to the nearest ten thousand: _____
- 7) Round to the highest place or use front end rounding to estimate the number: _____

Section 2: Find the square or square root of the value given, expand and calculate.

- 8) 6^2 9) $\sqrt{64}$ 10) $6^3 \times 3^4 \times 1^3 =$

Section 3: Solve each by using the operation correctly.

- | | |
|-----------------------|-----------------------|
| 11) $49 + 1258$ | 15) $(8273)(489)$ |
| 12) $8943 + 47 + 309$ | 16) $(703)(56)$ |
| 13) $6526 - 847$ | 17) $34927 \div 53$ |
| 14) $200506 - 93278$ | 18) $104328 \div 207$ |

Section 4: Use the order of operations (PEMDAS) to solve the following problems:

- 19) $(8 + 2 \times 4) \div 4(2)(1) =$ 20) $20 + (17 - 3^2) - 8 \div 2$

FRACTIONS

Section 1: Perform the operations as directed.

- 21) Change the improper fraction $\frac{47}{8}$ to a mixed number: _____
- 22) Change the improper fraction $\frac{32}{12}$ to a mixed number: _____
- 23) Change the mixed number $7\frac{8}{9}$ to an improper fraction: _____
- 24) Change the mixed number $2\frac{3}{14}$ to an improper fraction: _____
- 25) Reduce/simplify $\frac{24}{36}$ to lowest terms: _____
- 26) Reduce/simplify $\frac{18}{24}$ to lowest terms: _____

Section 2: Find the product for each. Reduce/simplify to lowest terms.

27) $\frac{3}{5} \times \frac{10}{11}$

28) $4 \times 3\frac{1}{8}$

29) $3\frac{4}{5} \times 4\frac{1}{6}$

Section 3: Find the quotient for each. Reduce/simplify to lowest terms.

30) $\frac{3}{5} \div \frac{9}{10}$

31) $1\frac{3}{7} \div 2\frac{3}{14}$

32) $4 \div 2\frac{2}{9}$

33) $4\frac{2}{9} \div 6$

Section 4: Find the sum of each. Reduce/simplify to lowest terms.

34) $\frac{5}{6} + \frac{8}{9}$

35) $12\frac{4}{5} + 3\frac{3}{10}$

36) $2\frac{1}{3} + 8\frac{2}{3}$

Section 5: Find the difference for each. Reduce/simplify to lowest terms.

37) $15\frac{4}{7} - 9$

38) $14 - 3\frac{4}{7}$

39) $12\frac{3}{4} - 5\frac{1}{2}$

40) $12\frac{1}{2} - 5\frac{3}{4}$

DECIMALS

Section 1: Place Value, Rounding, and Comparing

For the number 9827.63451, identify the place value and round as follows:

41) The 3 is in what place? _____

42) The 5 is in what place? _____

43) Round to the nearest tenth. _____

44) Round to the nearest thousandth: _____

45) Write out the number in words: _____

46) Round to the highest place or use front end rounding to estimate the number: _____

Use $>$, $<$ or $=$ to compare the following values:

47) 14.257 _____ 14.3

48) 2.7 _____ 2.07

Section 2: Solve each problem by using the operation correctly.

49) $24.235 + 108.07$

54) $0.003 \bullet 2.1$

50) $67 + 23.09 + 4056.6673$

55) $(0.07)(0.07)$

51) $18.84 - 2.005$

56) $100 \div 0.004$

52) $120 - 56.88$

57) $8.8 \div 0.22$

53) $(40.2)(1.003)$

58) $9.09 \div 18$

Section 3: Convert the fraction to a decimal and the decimal to a fraction (reduce, if necessary).

59) $\frac{3}{8}$

60) 0.085

WHOLE NUMBERS

Place Value and Rounding
Square/Square Root/Exponential Notation
Add/Subtract/Multiply/Divide
Order of Operations

Section 1: Place Value and Rounding

For the number 675, 384 identify the place value and round as follows:

- 1) The 5 is in what place? _____
- 2) The 6 is in what place? _____
- 3) The 8 is in what place? _____
- 4) The 3 is in what place? _____
- 5) Write out the number in words: _____
- 6) Round to the nearest ten thousand: _____
- 7) Round to the nearest ten: _____
- 8) Round to the nearest thousand: _____
- 9) Round to the nearest hundred: _____
- 10) Round to the highest place or use front end rounding to estimate the number: _____

For the number 9, 834, 567, identify the place value and round as follows:

- 11) The 4 is in what place? _____
- 12) The 6 is in what place? _____
- 13) The 9 is in what place? _____
- 14) The 7 is in what place? _____
- 15) Write out the number in words: _____
- 16) Round to the nearest hundred: _____
- 17) Round to the nearest hundred thousand: _____
- 18) Round to the nearest thousand: _____
- 19) Round to the nearest ten: _____
- 20) Round to the highest place or use front end rounding to estimate the number: _____

Section 2: Find the square or square root of the value given, exponential notation.

- | | | | |
|-----------|------------------|------------------|--|
| 1) 7^2 | 6) 30^2 | 11) $\sqrt{81}$ | 16) Expand & calculate: $4^4 =$ |
| 2) 8^2 | 7) 12^2 | 12) $\sqrt{25}$ | 17) Expand & calculate: $5^3 \cdot 3^5 =$ |
| 3) 9^2 | 8) $\sqrt{100}$ | 13) $\sqrt{169}$ | 18) Expand & calculate: $2^4 \cdot 3^3 \cdot 1^5 =$ |
| 4) 14^2 | 9) $\sqrt{16}$ | 14) $\sqrt{49}$ | 19) Write with exponents:
$2 \cdot 3 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 3 \cdot 3 =$ |
| 5) 11^2 | 10) $\sqrt{225}$ | 15) $\sqrt{121}$ | 20) Write with exponents:
$1 \cdot 1 \cdot 1 \cdot 2 \cdot 2 \cdot 1 =$ |

Section 3: Solve each by using the operation correctly.

- | | | | |
|----------------------|-------------------|----------------------|------------------------|
| 1) $57 + 356$ | 6) $71 - 49$ | 11) $(448)(6)$ | 16) $543 \div 3$ |
| 2) $299 + 676$ | 7) $525 - 372$ | 12) $672 \cdot 17$ | 17) $1728 \div 24$ |
| 3) $6600 + 438 + 36$ | 8) $8001 - 6668$ | 13) $(34)(57)$ | 18) $10,2250 \div 50$ |
| 4) $9720 + 836$ | 9) $712 - 377$ | 14) $647 \cdot 1000$ | 19) $57195 \div 301$ |
| 5) $65 + 92 + 88$ | 10) $8424 - 7079$ | 15) $(14)(51)(100)$ | 20) $289,000 \div 100$ |

Section 4: Use the order of operations (PEMDAS) to solve the following problems:

- 1) $40 + 4(5) \div 10 =$ 2) $55 \div (5)(11) + 25 =$ 3) $12(6 + 2 \times 2) - 28 =$ 4) $(4 - 1)^2 + 45 \div 3 =$

FRACTIONS

Change Mixed Numbers to Improper Fractions and Vice Versa

Reduce/Simplify

Add/Subtract/Multiply/Divide

Section 1

Change the Improper Fractions to Mixed or Whole Numbers.

1) $\frac{28}{5}$

2) $\frac{26}{4}$

3) $\frac{63}{9}$

4) $\frac{95}{15}$

5) $\frac{123}{6}$

Change the Mixed or Whole Numbers to Improper Fractions.

6) $7\frac{2}{7}$

7) $2\frac{18}{19}$

8) 27

9) $21\frac{4}{5}$

10) $1\frac{7}{15}$

Reduce/simplify each to lowest terms.

11) $\frac{32}{60}$

12) $\frac{18}{36}$

13) $\frac{48}{72}$

14) $\frac{16}{24}$

15) $\frac{12}{18}$

Section 2: Find the product for each. Reduce/simplify to lowest terms.

1) $\frac{3}{4} \times \frac{4}{5}$

3) $\frac{1}{6} \times \frac{10}{11}$

5) $\frac{14}{25} \times \frac{15}{28}$

7) $6 \times \frac{7}{18}$

9) $2\frac{4}{7} \times 5\frac{4}{9}$

2) $4\frac{2}{7} \times 5\frac{1}{4}$

4) $3\frac{3}{8} \times 2\frac{1}{9}$

6) $6\frac{3}{5} \times 15$

8) $\frac{8}{13} \times \frac{8}{13}$

10) $\frac{24}{25} \times 20$

Section 3: Find the quotient for each. Reduce/simplify to lowest terms.

1) $\frac{2}{3} \div \frac{3}{4}$

3) $\frac{2}{9} \div \frac{1}{3}$

5) $\frac{4}{5} \div 24$

7) $5\frac{5}{8} \div 5\frac{5}{6}$

9) $3\frac{2}{3} \div \frac{6}{7}$

2) $\frac{5}{8} \div \frac{15}{16}$

4) $24 \div \frac{4}{5}$

6) $\frac{5}{6} \div 10$

8) $8\frac{1}{4} \div 2\frac{3}{8}$

10) $6\frac{3}{8} \div 4\frac{1}{4}$

Section 4: Find the sum of each. Reduce/simplify to lowest terms.

1) $\frac{3}{8} + \frac{1}{6}$

3) $\frac{7}{8} + \frac{7}{12}$

5) $4\frac{2}{3} + 7\frac{8}{9}$

7) $2\frac{3}{4} + 9\frac{5}{6}$

9) $4 + \frac{3}{4} + 1\frac{5}{8}$

2) $\frac{7}{10} + \frac{17}{30}$

4) $5 + 15\frac{2}{3}$

6) $3\frac{1}{6} + 4\frac{3}{10}$

8) $\frac{1}{5} + \frac{7}{10} + \frac{4}{15}$

10) $2\frac{4}{5} + 6\frac{3}{4}$

Section 5: Find the difference for each. Reduce/simplify to lowest terms.

1) $\frac{7}{8} - \frac{3}{8}$

3) $\frac{7}{12} - \frac{2}{9}$

5) $7 - 3\frac{1}{5}$

7) $12\frac{1}{4} - 9\frac{5}{6}$

9) $8\frac{2}{3} - 7\frac{4}{5}$

2) $\frac{5}{8} - \frac{1}{3}$

4) $8\frac{4}{7} - 3$

6) $5\frac{7}{16} - 2\frac{3}{8}$

8) $4\frac{5}{6} - 1\frac{5}{12}$

10) $6\frac{5}{6} - 2\frac{7}{8}$

DECIMALS

Place Value, Rounding, and Comparing

Add/Subtract/Multiply/Divide

Conversion: Fraction to a Decimal and Vice Versa

Section 1: Place Value, Rounding, and Comparing

For the number 1829.7456, identify the place value and round as follows

- 1) The 4 is in what place? _____
- 2) The 7 is in what place? _____
- 3) The 2 is in what place? _____
- 4) The 6 is in what place? _____
- 5) Write out the number in words: _____
- 6) Round to the nearest hundred: _____
- 7) Round to the nearest tenth: _____
- 8) Round to the nearest thousandth: _____
- 9) Round to the nearest hundredth: _____
- 10) Round to the highest place or use front end rounding to estimate the number: _____

Use $>$, $<$, or $=$ to compare the following values.

- 11) 4.5 _____ 4.35
- 12) 12.152 _____ 12.19
- 13) 20.155 _____ 201.55
- 14) 25.1 _____ 25.100
- 15) 98.13 _____ 89.999

Section 2: Solve each problem by using the operation correctly.

- | | |
|--------------------------|-------------------------|
| 1) $12.3 + 5.42$ | 16) $6.32 \cdot 0.2$ |
| 2) $8.33 + 22.081$ | 17) $12.9 \cdot 2.6$ |
| 3) $6.02 + 132 + 0.765$ | 18) $0.001 \cdot 2.02$ |
| 4) $2.52 + 6.7 + 56.989$ | 19) $(123)(1.23)$ |
| 5) $106.2 + 3.11 + 27$ | 20) $(0.03)(0.03)$ |
| 6) $17.83 - 5.84$ | 21) $(765.4)(4.08)$ |
| 7) $22.05 - 6.936$ | 22) $7.65 \div 2$ |
| 8) $10.7 - 2.71$ | 23) $2 \div 1.25$ |
| 9) $10 - 3.44$ | 24) $45.03 \div 0.03$ |
| 10) $105.64 - 19.143$ | 25) $0.15 \div 7.5$ |
| 11) $2000.06 - 333.222$ | 26) $6.75 \div .0025$ |
| 12) $5678.4 - 23.004$ | 27) $9.23 \div 100$ |
| 13) 1.4×1.004 | 28) $1000 \div 0.08$ |
| 14) 22.4×8 | 29) $321.963 \div 3.21$ |
| 15) 0.35×0.0021 | 30) $585 \div 0.005$ |

Section 3: Convert each fraction to a decimal and each decimal to a fraction (reduce, if necessary).

- | | | | | | |
|------------------|------------------|-------------------|---------|---------|---------|
| 1) $\frac{4}{5}$ | 2) $\frac{7}{8}$ | 3) $\frac{7}{16}$ | 4) 0.85 | 5) 0.08 | 6) 17.6 |
|------------------|------------------|-------------------|---------|---------|---------|

ANSWER KEY

Diagnostic Test

Whole Numbers

Section 1: Place Value and Rounding

- 1) ten thousands
- 2) hundreds
- 3) one hundred twenty-six thousand, seven hundred eighty-three
- 4) 126,780
- 5) 126,800
- 6) 130,000
- 7) 100,000

Section 2: Find the square or square root of the value given, expand and calculate.

- 8) 36 9) 8 10) $6 \times 6 \times 6 \times 3 \times 3 \times 3 \times 1 \times 1 \times 1 = 17,496$

Section 3: Solve each by using the operation correctly.

- | | |
|-------------|---------------|
| 11) 1307 | 15) 4,045,497 |
| 12) 9,299 | 16) 39,368 |
| 13) 5,679 | 17) 659 |
| 14) 107,228 | 18) 504 |

Section 4: Use the order of operations (PEMDAS) to solve the following problems:

- 19) 2 20) 24

Fractions

Section 1: Perform the operations as directed.

- 21) $5\frac{7}{8}$ 22) $2\frac{2}{3}$ 23) $\frac{71}{9}$ 24) $\frac{31}{14}$ 25) $\frac{2}{3}$ 26) $\frac{3}{4}$

Section 2: Find the product for each. Reduce/simplify to lowest terms

- 27) $\frac{6}{11}$ 28) $12\frac{1}{2}$ 29) $15\frac{5}{6}$

Section 3: Find the quotient for each. Reduce/simplify to lowest terms.

- 30) $\frac{2}{3}$ 31) $\frac{20}{31}$ 32) $1\frac{4}{5}$ 33) $\frac{19}{27}$

Section 4: Find the sum of each. Reduce/simplify to lowest terms.

34) $1\frac{13}{18}$

35) $16\frac{2}{5}$

36) 11

Section 5: Find the difference for each. Reduce/simplify to lowest terms.

37) $6\frac{4}{7}$

38) $10\frac{3}{7}$

39) $7\frac{1}{4}$

40) $6\frac{3}{4}$

Decimals

Section 1: Place Value, Rounding, and Comparing

41) hundredths

42) ten thousandths

43) 9827.6

44) 9827.635

45) nine thousand eight hundred twenty-seven and sixty-three thousand four hundred fifty-one hundred thousandths

46) 10000

47) <

48) >

Section 2: Solve each problem by using the operation correctly.

49) 132.305

50) 4146.7573

51) 16.835

52) 63.12

53) 40.3206

54) 0.0063

55) 0,0049

56) 25,000

57) 40

58) 0.505

Section 3: Convert the fraction to a decimal and the decimal to a fraction (reduce, if necessary).

59) 0.375

60) $\frac{17}{200}$

WHOLE NUMBERS

Place Value and Rounding
Square/Square Root/Exponential Notation
Add/Subtract/Multiply/Divide
Order of Operations

Section 1: Place Value and Rounding

- 1) thousands
- 2) hundred thousands
- 3) tens
- 4) hundreds
- 5) six hundred seventy-five thousand, three hundred eighty-four
- 6) 680,000
- 7) 675,380
- 8) 675,000
- 9) 675,400
- 10) 700,000
- 11) thousands
- 12) tens
- 13) millions
- 14) ones or units
- 15) nine million, eight hundred thirty-four thousand, five hundred sixty-seven
- 16) 9,834,600
- 17) 9,800,000
- 18) 9,835,000
- 19) 9,834,570
- 20) 10,000,000

Section 2: Find the square or square root of the value given, exponential notation.

- | | | | |
|--------|--------|--------|---|
| 1) 49 | 6) 900 | 11) 9 | 16) $4 \times 4 \times 4 \times 4 = 256$ |
| 2) 64 | 7) 144 | 12) 5 | 17) $5 \times 5 \times 5 \times 3 \times 3 \times 3 \times 3 = 30375$ |
| 3) 81 | 8) 10 | 13) 13 | 18) $2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 1 \times 1 \times 1 \times 1 = 432$ |
| 4) 196 | 9) 4 | 14) 7 | 19) $2^3 \bullet 3^5$ |
| 5) 121 | 10) 15 | 15) 11 | 20) $1^4 \bullet 2^2$ |

Section 3: Solve each by using the operation correctly.

- | | | | |
|-----------|----------|-------------|-------------|
| 1) 413 | 6) 22 | 11) 2688 | 16) 181 |
| 2) 975 | 7) 153 | 12) 11,424 | 17) 72 |
| 3) 7074 | 8) 1333 | 13) 1938 | 18) 2045 |
| 4) 10,556 | 9) 335 | 14) 647,000 | 19) 190 r 5 |
| 5) 245 | 10) 1345 | 15) 71,400 | 20) 2890 |

Section 4: Use the order of operations (PEMDAS) to solve the following problems.

- 1) 42
- 2) 146
- 3) 92
- 4) 24

FRACTIONS

Change Mixed Numbers to Improper Fractions and Vice Versa

Reduce/Simplify

Add/Subtract/Multiply/Divide

Section 1

Change the Improper Fractions to Mixed or Whole Numbers.

1) $5\frac{3}{5}$

2) $6\frac{1}{2}$

3) 7

4) $6\frac{1}{3}$

5) $20\frac{1}{2}$

Change the Mixed or Whole Numbers to Improper Fractions.

6) $\frac{51}{7}$

7) $\frac{56}{19}$

8) $\frac{27}{1}$

9) $\frac{109}{5}$

10) $\frac{22}{15}$

Reduce/simplify each to lowest terms.

11) $\frac{8}{15}$

12) $\frac{1}{2}$

13) $\frac{2}{3}$

14) $\frac{2}{3}$

15) $\frac{2}{3}$

Section 2: Find the product for each. Reduce/simplify to lowest terms.

1) $\frac{3}{5}$

3) $\frac{5}{33}$

5) $\frac{3}{10}$

7) $2\frac{1}{3}$

9) 14

2) $22\frac{1}{2}$

4) $7\frac{1}{8}$

6) 99

8) $\frac{64}{169}$

10) $19\frac{1}{5}$

Section 3: Find the quotient for each. Reduce/simplify to lowest terms.

1) $\frac{8}{9}$

3) $\frac{2}{3}$

5) $\frac{1}{30}$

7) $\frac{27}{28}$

9) $4\frac{5}{18}$

2) $\frac{2}{3}$

4) 30

6) $\frac{1}{12}$

8) $3\frac{9}{19}$

10) $1\frac{1}{2}$

Section 4: Find the sum of each. Reduce/simplify to lowest terms.

1) $\frac{13}{24}$

3) $1\frac{11}{24}$

5) $12\frac{5}{9}$

7) $12\frac{7}{12}$

9) $6\frac{3}{8}$

2) $1\frac{4}{15}$

4) $20\frac{2}{3}$

6) $8\frac{7}{15}$

8) $1\frac{1}{6}$

10) $9\frac{11}{20}$

Section 5: Find the difference for each. Reduce/simplify to lowest terms.

1) $\frac{1}{2}$

3) $\frac{13}{36}$

5) $3\frac{4}{5}$

7) $2\frac{5}{12}$

9) $\frac{13}{15}$

2) $\frac{7}{24}$

4) $5\frac{4}{7}$

6) $3\frac{1}{16}$

8) $3\frac{5}{12}$

10) $3\frac{23}{24}$

Decimals

Place Value, Rounding, and Comparing
Add/Subtract/Multiply/Divide
Conversions: Fraction to a Decimal and Vice Versa

Section 1: Place Value, Rounding, and Comparing

- 1) hundredths
- 2) tenths
- 3) tens
- 4) ten thousandths
- 5) one thousand eight hundred twenty-nine and seven thousand four hundred fifty-six ten thousandths
- 6) 1800
- 7) 1829.7
- 8) 1829.746
- 9) 1829.75
- 10) 2000
- 11) >
- 12) <
- 13) <
- 14) =
- 15) >

Section 2: Solve each problem by using the operation correctly.

- | | |
|--------------|--------------|
| 1) 17.72 | 16) 1.264 |
| 2) 30.411 | 17) 33.54 |
| 3) 138.785 | 18) 0.00202 |
| 4) 66.209 | 19) 151.29 |
| 5) 136.31 | 20) 0.0009 |
| 6) 11.99 | 21) 3122.832 |
| 7) 15.114 | 22) 3.825 |
| 8) 7.99 | 23) 1.6 |
| 9) 6.56 | 24) 1501 |
| 10) 86.497 | 25) 0.02 |
| 11) 1666.838 | 26) 2700 |
| 12) 5655.396 | 27) 0.0923 |
| 13) 1.4056 | 28) 12500 |
| 14) 179.2 | 29) 100.3 |
| 15) 0.000735 | 30) 117000 |

Section 3: Convert each fraction to a decimal and each decimal to a fraction (reduce, if necessary).

- | | | | | | |
|--------|----------|-----------|--------------------|-------------------|--------------------|
| 1) 0.8 | 2) 0.875 | 3) 0.4375 | 4) $\frac{17}{20}$ | 5) $\frac{2}{25}$ | 6) $17\frac{3}{5}$ |
|--------|----------|-----------|--------------------|-------------------|--------------------|