

# Unit 1: Number Skills Practice 2

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Math 9 Principles

Name: \_\_\_\_\_

Block: \_\_\_\_\_

Please initial this box to indicate you carefully read over your test and checked your work for simple mistakes.

	What I can do in this unit	Level
1-1	I can identify numbers on a number line, compare positive and negative numbers, and evaluate absolute values.	
1-2	I can combine successive signs and add or subtract two or more integers. (positive or negative)	
1-3	I can evaluate expressions with integers using correct order of operations.	
1-4	I can add or subtract two or more fractions (in mixed number form or improper).	
1-5	I can multiply or divide two or more fractions, remembering to simplify before evaluating. I always reduce!	

Code	Value	Description
N	Not Yet Meeting Expectations	I just don't get it.
MM	Minimally Meeting Expectations	Barely got it, I need some prompting to help solve the question.
M	Meeting Expectations	Got it, I understand the concept without help or prompting.
E	Exceeding Expectations	Wow, nailed it! I can use this concept to solve problems I may have not seen in practice. I also get little details that may not be directly related to this target correct.

1-1: I can identify numbers on a number line, compare positive and negative numbers, and evaluate absolute values.

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1. Evaluate:  $|6 - 25|$

$$= 19$$

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2. Place a  $<$ ,  $>$ , or a  $=$  sign between the following to make it true:

$$4 \underline{=} |1 - 5|$$

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3. Evaluate:  $|-4| - |-10|$

$$= 4 - 10$$
$$= -6$$

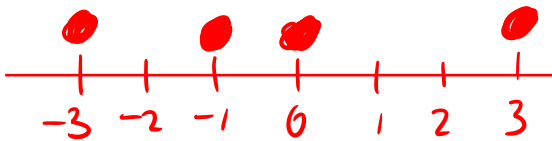
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4.  $|-3 + 6| - |-8|$

$$= |3| - |-8|$$
$$= 3 - 8$$
$$= -5$$

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5. Graph the following numbers on a number line  $-3, 3, 0, -1,$



6. Evaluate the expression  $|x + y|$  when  $x = 4$  and  $y = -6$ .

$$= |4 + -6|$$
$$= |-2| = 2$$

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7. Evaluate the expression  $|a| - |b - c|$  when  $a = -5, b = 11,$  and  $c = -6$ .

$$= |-5| - |11 - -6|$$
$$= 5 - 17$$
$$= -12$$

**1-2: I can combine successive signs and add or subtract two or more integers. (positive or negative)**

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8. Evaluate:  $5 - (-2) =$

$$= 5 + 2$$
$$= \textcircled{7}$$

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9. Evaluate:  $-3 - 14 =$

$$= \textcircled{-17}$$

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10. Evaluate:  $3 - (1 - 9) =$

$$= 3 - -8$$
$$= 3 + 8$$
$$= \textcircled{11}$$

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11. Evaluate:  $(5 - 7) - (-3 + 6) =$

$$= -2 - 3$$
$$= \textcircled{-5}$$

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12. Evaluate:  $7 + (-1 - 6 + 2) =$

$$= 7 + -5$$
$$= \textcircled{2}$$

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13. Find the value that should go in the blank in order for the statement to be true.

$$4 + \underline{\quad} = -7$$

$$\textcircled{-11}$$

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14. Find the value that should go in the blank in order for the statement to be true.

$$\underline{\quad} - (-8) = 4$$

$$\textcircled{-4}$$

1-3: I can evaluate expressions with integers using correct order of operations.

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15. Evaluate:  $23 - 4(6) =$

$$= 23 - 24$$
$$= \textcircled{-1}$$

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16. Evaluate:  $(-5 - 3)(-7 + 2) =$

$$= (-8)(-5)$$
$$= \textcircled{40}$$

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17. Evaluate:  $7 - 2(0 - -9) =$

$$= 7 - 2(9)$$
$$= 7 - 18$$
$$= \textcircled{-11}$$

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18. Evaluate:  $3(9 - 11) - 2(-5 + 3) =$

$$= 3(-2) - 2(-2)$$
$$= -6 - -4$$
$$= \textcircled{-2}$$

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19. Evaluate:  $-(4 + -7) - 5(-10 - -8) =$

$$= -(-3) - 5(-2)$$
$$= 3 + 10$$
$$= \textcircled{13}$$

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20. Evaluate:  $-6 + -3(-5 - -4) =$

$$= -6 - 3(-1)$$
$$= -6 + 3$$
$$= \textcircled{-3}$$

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21. Evaluate:  $\frac{-4-2}{-2+4}$

$$= \frac{-6}{2} = \textcircled{-3}$$

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22. Evaluate:  $\frac{3(-5)-4(5-10)}{(5-6)(-7--2)}$

$$= \frac{-15 - 4(-5)}{(-1)(-5)} = \frac{-15 + 20}{5} = \frac{5}{5} = \textcircled{1}$$

1-4: I can add or subtract two or more fractions (in mixed number form or improper).

23. Complete the equivalent fraction statement:  $\frac{5}{6} = \frac{4}{24}$

$$\frac{20}{24}$$

24. Reduce to lowest terms:  $\frac{56}{64} =$

$$\frac{7}{8}$$

Rewrite each question with common denominators then add or subtract as required.

25.  $\frac{1}{3} + \frac{3}{4}$

$$\frac{4}{12} + \frac{9}{12} = \frac{13}{12}$$

26.  $\frac{7}{8} - \frac{2}{3}$

$$\frac{21}{24} - \frac{16}{24} = \frac{5}{24}$$

27.  $2\frac{1}{4} - 3\frac{1}{3}$

$$\frac{9}{4} - \frac{10}{3} = \frac{27}{12} - \frac{40}{12} = -\frac{13}{12}$$

28.  $\frac{2}{5} + \frac{3}{4}$

$$\frac{8}{20} + \frac{15}{20} = \frac{23}{20}$$

29.  $\frac{5}{6} - 1\frac{1}{18}$

$$\frac{5}{6} - \frac{19}{18} = \frac{15}{18} - \frac{19}{18} = -\frac{4}{18} = -\frac{2}{9}$$

1-5: I can multiply or divide two or more fractions, remembering to simplify before evaluating. I always reduce!

30. Write the reciprocal of  $-3\frac{2}{3}$ .  $-\frac{11}{3} \rightarrow -\frac{3}{11}$

31. Evaluate:  $\frac{5}{9} \cdot \frac{3}{25}$   
 $\frac{15}{93} \cdot \frac{31}{255} = \frac{1}{15}$

32. Evaluate:  $4 \div \frac{2}{3}$   
 $2 \cdot \frac{3}{2} = 6$

33. Evaluate:  $2\frac{2}{5} \div \frac{3}{10}$   
 $1\frac{12}{5} \cdot \frac{10}{3} = 8$

34. Evaluate:  $-2\frac{1}{4} \div \frac{15}{32} \div \frac{36}{25}$   
 $-\frac{19}{4} \cdot \frac{32}{153} \cdot \frac{255}{364} = \frac{10}{3}$

35. Evaluate:  $(\frac{7}{8} - \frac{1}{4}) \cdot (\frac{2}{3} \div \frac{1}{9})$   
 $\frac{7}{8} - \frac{1}{4} = \frac{7}{8} - \frac{2}{8} = \frac{5}{8}$   
 $\frac{2}{3} \cdot \frac{3}{1} = 2$   
 $\frac{5}{8} \cdot 2 = \frac{10}{8} = \frac{5}{4}$

36. A rectangular hallway has dimensions 6 feet by 18 feet. It is to be tiled with square tiles, each with the dimensions  $\frac{2}{3}$  feet by  $\frac{2}{3}$  feet. How many tiles will you need?

$6 \div \frac{2}{3} = 6 \cdot \frac{3}{2} = 9$   
 $18 \div \frac{2}{3} = 18 \cdot \frac{3}{2} = 27$   
 $9 \cdot 27 = 243 \text{ tiles}$

37. A recipe calls for three quarters of a bowl of flour and one fifth of a bowl of sugar, then to fill the remainder of the bowl with milk. What fraction of the bowl is filled with milk?

$1 - \frac{3}{4} - \frac{1}{5}$   
 $= 1 - \frac{15}{20} - \frac{4}{20} = \frac{1}{20} \text{ milk}$