

# HCS Math Spiral 2016-17

## Learning Period 4

February 1 – March 31

***Objectives:** Students should be able to evaluate simple algebraic expressions in one variable, add, subtract and multiply with negative integers, solve geometric problems using algebra.*

### **Daily independent review for students in grades 5 through 8.**

The goal of HCS Math Spirals is to refresh students on past material and fill in key holes that have been identified by upper grade math teachers as problem areas for many students. Our hope is that students will work independently to complete one problem set per day (2-3 problems) either before or after their daily math lesson. These problems should not take more than 10 minutes to complete. If your student takes longer than this, make a note of the math concept, move on, and come back to the problem set once you've covered the subject in a math lesson. The Math Spiral is not to be used as a one-day worksheet; effectiveness comes in the habit of daily, brief review.

To refresh concepts that may not be addressed in your current math curriculum, one great resource is Khan Academy online found at [www.khanacademy.org](http://www.khanacademy.org).

At the end of each learning period your Education Coordinator will have your student complete a short benchmark, in office, which will assess the concepts covered on the spiral they just completed.

**2/1**

- 1.) If  $k = 3$ , what is the value of  $7k - 2$ ?      2.) If  $n = 31$ , what is the value of  $6 - n$ ?
- 3.) If  $n = 4$ , what is the value of  $6 \times n - 3$ ?

**2/2**

- 1.) If  $z = 3$ , what is the value of  $5 \times (6 - z)$ ?    2.) If  $s = 4$ , what is the value of  $s(9 - 4)$ ?
- 3.) If  $x = -2$ , what is the value of  $x - 5$ ?

**2/3** Convert the mixed number into an improper fraction.

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

**2/6** Convert the improper fraction into a mixed number.

- 1.)  $\frac{11}{3}$                                       2.)  $\frac{9}{5}$                                       3.)  $\frac{14}{7}$

**2/7** Solve.

- 1.)  $-3 + m$ , when  $m = -4$                                       2.)  $2.67 + p$ , when  $p = -1.2$
- 3.)  $m + 12.2$ , when  $m = -10.5$

**2/8** Solve.

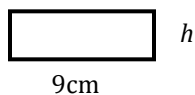
- 1.)  $2\frac{1}{3} + 4\frac{1}{2}$                                       2.)  $1\frac{1}{3} + \frac{2}{3}$                                       3.)  $2\frac{2}{5} + 1\frac{1}{10}$

**2/9**

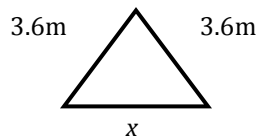
- 1.) Sally caught twice as many fish as her dad. If her dad caught  $f$  fish, write an expression to show how many fish sally caught?
- 2.) Ann has 54 crayons. This number is 18 more crayons than Bill has. Write an equation that can be used to find  $b$ , the number of crayons that Bill has.

**2/10**

- 1.) What is the value of  $h$  if the area is  $27\text{cm}^2$ ?



- 2.) Find the perimeter of the triangle if  $x = 4.91\text{m}$ .



**2/13**

- 1.) Evaluate  $y \times y$  when  $y = 10$ .      2.) Find the value of  $x$  if  $x + x = 28$
- 3.) Find the value of  $m$  if  $3m = 39$

**2/14**

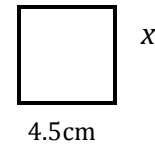
- 1.) Find the value of  $s$  if  $s + 5 = -10$ .      2.) Find the value of  $r$  if  $2 + r = 1$ .
- 3.) Find the value of  $m$  if  $6m = 6$ .

**2/15** Solve.

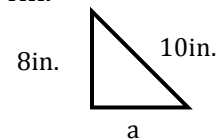
- 1.)  $\frac{1}{2} + m = \frac{3}{4}$       2.)  $6x + 1 = 13$       3.)  $-3 + m = 15$

**2/16**

- 1.) Sketch a pair of parallel lines.
- 2.) Find the missing measurement,  $x$ , if the perimeter = 28.2cm.



- 3.) Find the missing measurement,  $a$ , if the perimeter = 24in.

**2/21** Solve each equation for the variable.

- 1.)  $m - 2 = -4$       2.)  $n \div 5 = 9$       3.)  $6y = 6$

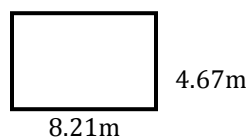
**2/22** Solve.

- 1.)  $-41 - (-3)$       2.)  $5 + (-20)$       3.)  $-13 + 13$

**2/23**

- 1.) Draw a pair of perpendicular lines.

- 2.) Find the area of the rectangle.



- 3.) Solve  $\frac{9}{10} - \frac{2}{7}$

**2/24** Solve for the variable.

1.)  $16x = 8$

2.)  $\frac{m}{3} = 2$

3.)  $6x = 2$

**2/27**

1.)  $-5 + m = -5$

2.) Create your own algebraic equation and ask your parent to solve.

3.) What is the opposite of -8?

**2/28**

1.)  $\frac{-2}{7} + \left(\frac{-3}{7}\right)$

2.) When you add two negative numbers will you always get a negative answer? Explain.

3.)  $32 + (-31)$

**3/1**

1.) Explain how you find the area of a rectangle.

2.) Can you have a negative perimeter or area? Explain.

**3/2** Solve.

1.)  $-4.67 + (-3.1)$

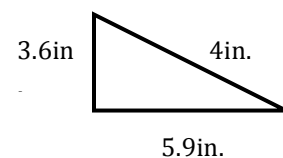
2.)  $13.1 - 22$

3.) If you add two positive numbers will you always get a positive answer? Explain.

**3/3** Solve.

1.)  $\frac{4}{9} + \frac{1}{3}$

2.) Find the perimeter.

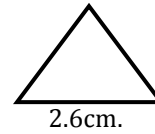


3.)  $x + \frac{1}{4} = \frac{5}{12}$

**3/6**

1.) Draw an equilateral triangle.

2.) Find the perimeter of this equilateral triangle.

**3/7 Solve.**

1.)  $m + (-6) = 10$

2.)  $3x = 21$

3.)  $-14 - (-4)$

**3/8 Solve.**

1.)  $15 \times \frac{1}{5}$

2.)  $2\frac{2}{3} \times 1\frac{1}{2}$

3.)  $\frac{n}{6} \times 18 = 12$

**3/9**

1.)  $0.321 - .029$

2.)  $4.5 + 0.09$

3.)  $8.01 - 3.13$

**3/10**

1.)  $\frac{2}{3} \div n = 1$

2.)  $\frac{2}{3} \div t = \frac{1}{6}$

3.)  $b \div \frac{1}{4} = \frac{8}{25}$

**3/13 Solve.**

1.)  $-3 - 5$       2.) Whole numbers and their opposites are called \_\_\_\_\_.

3.)  $\frac{1}{2} + 3\frac{1}{4}$

**3/14 Solve.**

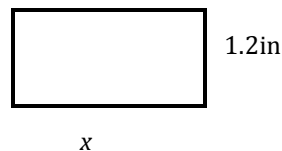
1.)  $-3 + (-12)$

2.)  $-15 + 8$

3.)  $4 - 19$

**3/15**

1.) Find the value of  $x$  if the  $A = 3.9 \text{ in}^2$



2.) Describe a real-life situation that can be represented by  $-12$ .

3.) Compare  $-7$   $\square$   $-4$

**3/16** Solve.

1.)  $5 + (-7) + (-17)$

2.)  $-31 + (-10)$

3.)  $0 + (-23)$

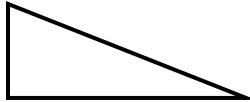
**3/17**

1.) The sum of two numbers is 20. Their product is 96. What are the two numbers?

2.) The sum of three numbers is 22. Their product is 320. What are the three numbers?

**3/20**

1.) *What kind of triangle is ABC?  
Equilateral, Isosceles or Scalene?*



2.) The perimeter of a sandbox is 32ft. The width is 6ft., what is the length?

**3/21** Solve.

1.)  $-6 \times 3$

2.)  $-3 \times (-3) \times (-1)$

3.)  $8 \times (-8)$

**3/22**

1.)  $b - 4.5 = 14$

2.)  $4\frac{1}{2} - 2\frac{5}{6}$

3.)  $4\frac{1}{2} \times \frac{1}{4}$

**3/23** Solve for the variable.

1.)  $t + (-4) = -4$

2.)  $p - 3 = -5$

3.)  $38 - x = 0$

**3/24** Solve for the variable.

1.)  $\frac{a}{6} = 2.5$

2.)  $4y = 48$

3.)  $4z + 5 = 9$

**3/27** Find the product.

1.)  $2(-10)$

2.)  $(-4)(-7)$

3.)  $(9)(3)$

**3/28**

Solve.

1.)  $156.29 + 26.213$

2.)  $49.2 - 26.8$

3.)  $12 \times 79$

**3/29**

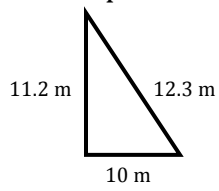
1.)  $286 \div 22$

2.)  $\frac{1}{5} + \frac{3}{10}$

3.)  $149.1 + 27$

**3/30**

1.) Find the perimeter:



2.) 
$$\begin{array}{r} 6.291 \\ - 4.320 \\ \hline \end{array}$$

3.) Order from least to greatest:  
2, -3, 5, 0, -9

**3/31**

Find the sum.

1.)  $1.6 + 0.89$

2.)  $3.12 + 6.4$

3.)  $\$317.26 + \$110.99$