



Entering Grade 8C Math: Foundations of Algebra

Summer Math Packet

1. You will do all of your work in the composition book given to you
2. There will be 10 problems a week for 10 weeks.
3. You will attempt all of the problems.
4. Full credit will be given for correct answers.
5. Half credit will be given for attempted problems
6. If you forgot the process of a certain math problem, you may use the website [KhanAcademy.com](https://www.khanacademy.com) to help yourself.
7. This math packets counts as your first test grade!

Time management is key!

****The packet is due on the first day of school ****

10 points will be taken off for every day it is late!

WEEK 1

Write each expression as a numerical/number expression.

1. 53 increased by 39
2. 42 divided by 13
3. 4 less than the product of 3 and 9
4. 9 more than the quotient of 12 and 4
5. The absolute value of -62

Solve the following equations.

6. $H + 68 = -23$
7. $71 + G = -90$
8. $|42| + F = -8$
9. $-4 = T + 2$
10. $14 + B = 65$

WEEK 2

Compare. Use $<$, $>$, or $=$.

1. 0.43 ____ 0.44
2. -7.002 ____ -7.0020
3. 0.250 ____ $\frac{1}{4}$
4. $\frac{7}{10}$ ____ 0.0750
5. $.23$ ____ $\frac{-2}{9}$
6. 2.3 ____ $\frac{1}{3}$

Order the following numbers from least to greatest.

7. -0.05 ; -0.058 ; -625 ; -0.063
8. -3.33 ; -3.34 ; -2.871 ; -2.08

Go to next page.

9. -0.04 ; -0.09 ; -0.9 ; -0.49

10. 7.11024 ; 7.10124 ; 7.01142 ; 7.1102

WEEK 3

Write each number in scientific notation.

1. 1260000

2. 3940

3. 0.06

4. 0.000000786

5. 4.7

Write each number in standard form.

6. 6.17×10^3

7. 7×10^4

8. 6.7×10^{-3}

9. 5.4×10^{-8}

10. 0.2×10^6

WEEK 4

Solve.

1. $92 + (-26) + 3$

2. $17 + (-7)$

3. $-6 + (-4)$

4. $-9 + 13$

5. $-3 + 8 + (-11)$

6. $-5 - 8$

7. $6 - |15|$

Go to next page

8. $|-16| - (-9)$

9. $-|6 - (-4)|$

10. $-|10| - |6|$

WEEK 5

Solve.

1. $(-4)(-4)(-4)$

2. $(-1)(-6)(-2)(-4)$

3. $(-3) \cdot 4 (-1) \cdot 9$

4. $-8 (2)(-5)$

5. $|-6 \cdot 9|$

6. $-60 \div (-10)$

7. $|-110| \div |-11|$

8. $-72 \div (-8)$

9. $-(-4) \div (-2)$

10. $|-66 \div 11|$

WEEK 6

Add fractions. Express answer in simplest form.

1. $1\frac{3}{5} + 6\frac{7}{10}$

2. $1\frac{1}{12} + 2\frac{2}{3} + 2\frac{1}{4}$

3. $4\frac{4}{5} + 8\frac{2}{3}$

4. $11\frac{3}{4} + 6\frac{3}{7}$

5. $5\frac{1}{9} + 4\frac{1}{2}$

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Subtract fractions. Express answer in simplest form.

6. $6\frac{3}{4} - 2\frac{1}{2}$

7. $3\frac{5}{6} - 1\frac{3}{4}$

8. $6\frac{1}{4} - 4\frac{3}{4}$

9. $1\frac{3}{10} - \frac{2}{5}$

10. $7\frac{5}{6} - 4\frac{2}{5}$

WEEK 7

Multiply fractions. Express answer in simplest form.

1. $\frac{3}{7} \times \frac{2}{3}$

2. $\frac{3}{4}$ of 84

3. $\frac{1}{9} \cdot \frac{2}{7} \cdot \frac{3}{8}$

4. $5\frac{2}{7} \times 2\frac{1}{6}$

5. $3\frac{1}{2} \cdot (-7)$

Divide fractions. Express answer in simplest form.

6. $\frac{1}{8} \div \frac{2}{3}$

7. $4\frac{3}{5} \div 2\frac{1}{6}$

8. $\frac{3}{7} \div \frac{1}{3}$

9. $4 \div \frac{2}{3}$

10. $-21 \div 1\frac{1}{6}$

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WEEK 8

Solve two-step problems.

1. $3H - 10 = 35$

2. $-7e + 8 = 13$

3. $y/9 - 7 = 97$

4. $25p \cdot 5 = 275$

5. $w/12 - 3 = 2$

6. $m/9 + 5 = 2$

7. $5.1 - 2.3z = 12$

8. $3h - 10 = 35$

9. $9K + 4.5 = 2.7$

10. $-0.3a + (-3.2) = 4$

WEEK 9

Combine like term to solve.

1. $-39 - s = -80$

2. $-6z - (-18z) = 120$

3. $9g - 4g - 8g = -15$

4. $4t + 7t - 2t = 72$

5. $5a + 12a = -37 - 14$

Use order of operations to solve the following problems.

6. $(1^3/4 + 1^{1/2}) \div 3^{1/2}$

7. $(1/2)^3 \cdot 3/5 + 1/4$

8. $(3^{1/2} - 1^{1/4}) \div (4^{1/8} + 1^{1/2})$

Go to the next page.

9. $9 \div \frac{2}{3} - \frac{7}{12}$

10. $6 \cdot \frac{3}{4} + \frac{1}{2}$

WEEK 10

Use order of operations to solve.

1. $-9x + 1 = -80$

2. $144 = -12(x + 5)$

3. $2(n + 5) = -2$

4. $20 \div [4(10 - 8)]$

5. $(6 + 25 - 7) \div 6$

6. $(5 + 16) \div 7 - 2$

7. $7 + 10 \times 5 + 10$

8. $8^3 - 8 \times 8 + 8 \div 8$

9. $(3 + 2)^2 + 10 \cdot 3 \div 5 - 12$

10. $(\frac{1}{3})^2 \times \frac{1}{2} \div \frac{1}{9} + \frac{3}{4} - \frac{1}{5}$