

a stem school

math skills sharpeners

2025 summer math workbook

FRÖEBEL
BILINGUAL SCHOOL
Home of the Space Generation

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A STEM School



Home of the Space Generation

2025 summer math skills sharpener *going to eighth grade*

student's name	date
teacher coming from	score
teacher going to	
parent's signature	date received

SKILLS SHARPENER FOR STUDENTS GOING TO EIGHTH GRADE MATH

WEEK 1.

Day 1.1 - Write the power in words and as a repeated multiplication. (2pts)

1) 6^4

2) 1^7

3) 2^2

4) 7^3

Day 1.2 - Solve the expression.

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

2) $\frac{-1}{6} + \frac{5}{6}$

3) $\frac{2}{15} - \frac{7}{15}$

4) $\frac{1}{12} - \left(\frac{-7}{12}\right)$

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

6) $-3\frac{2}{7} - 6\frac{3}{7}$

7) $\frac{2}{3} \cdot \frac{7}{8}$

8) $\frac{-5}{12} \cdot \frac{3}{10}$

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

10) $\frac{7}{12} \div \frac{2}{3}$

11) $\frac{7}{8} \div \frac{3}{10}$

12) $\frac{-4}{21} \div \frac{-12}{28}$

Day 1.3 - Complete the statement using $<$, $>$ or $=$.

1) 2 _____ $|-5|$

2) $|-1|$ _____ $|-5|$

3) 5 _____ $|-5|$

4) $|-2|$ _____ 0

5) 0.4 _____ $\left|-\frac{7}{8}\right|$

6) $|4.9|$ _____ $|-5.3|$

Day 1.4 - Find the product of each expression below using the rules for multiplying integers.

1) $-55 \times (-4) =$

2) $-20 \times (-3) =$

3) $17 \times (-14) =$

4) $-10 \times 65 =$

5) $-12 \times 20 =$

6) $-2 \times 17 \times (-5) =$

WEEK 2.

Day 2.1 - Find the quotient of each expression below using the rules for dividing integers.

1) $-125 \div (-25) =$

2) $-120 \div (-12) =$

3) $165 \div (-3) =$

4) $-72 \div 8 =$

5) $\frac{-200}{10} =$

6) $\frac{96}{-6} =$

Day 2.2 - Find the value of each numerical expression. Follow the order of operations when finding each value.

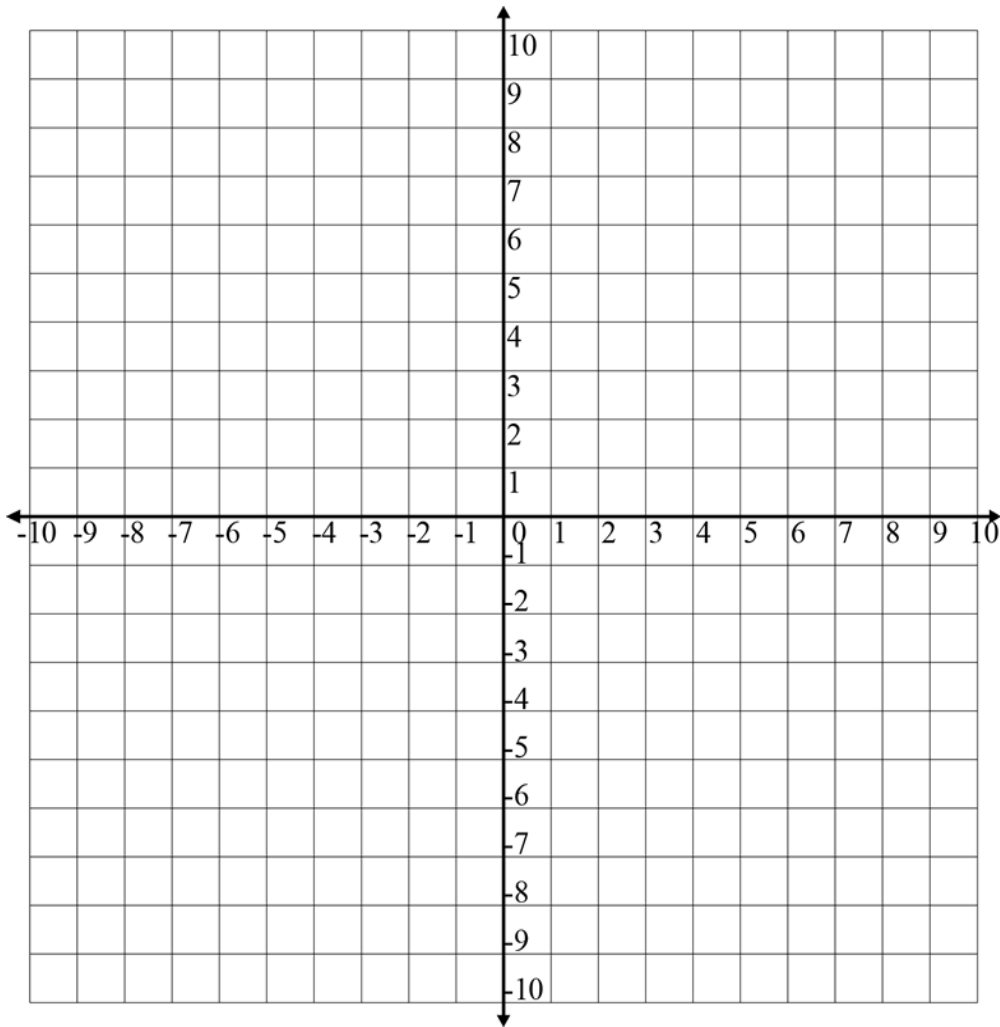
1) $(-81) \div (-27) \times (-4) =$

2) $196 \div (-14) \times (-13) =$

3) $25 \div 5 - 4 =$

4) $216 \div 6 + 4 \times 2 =$

Day 2.3 - Plot the point in a coordinate plane. Describe the location of the point (2pts each)



1. A(-2,5)
2. B(4,0)
3. C (2,1)
4. D(7, 7)
5. E. -1,-4)
6. F. (0,0)
7. G. (9,-4)

Day 2.4 - Evaluate each expression using the values given.

1) $2x + 3y$ when $x = 8$ and $y = 4$

2) $a - 4b$ when $a = 17$ and $b = 3$

3) $12x - (y + 10)$ when $x = 10$ and $y = 16$

4) $\frac{121}{x} - \frac{16}{y}$ when $x = 11$ and $y = 8$

WEEK 3.

Day 3.1 - Find the terms, constant/s and coefficient/s for each expression.

1) $6x + 4y + 123 =$

Terms:
Variables:
Constant:
Coefficients:

2) $k + 7l + 2 =$

Terms:
Variables:
Constant:
Coefficients:

3) $12 + z =$

Terms:
Variable:
Constant:
Coefficient:

4) $x + y =$

Terms:
Variables:
Constant:
Coefficients:

5) $12a + b + 13 =$

Terms:
Variables:
Constant:
Coefficients:

6) $g + 15j + 13z =$

Terms:
Variable:
Constant:
Coefficients:

Day 3.2 - Find the product of each rational expression below using the rules for multiplying integers.

1) $-\frac{1}{3} \times \left(-2\frac{3}{4}\right)$

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

3) $-2.8 \times (-1.7)$

4) -2.5×3.6

Day 3.3 - Solve the equation by adding.

1) $c - 7.6 = -4$

2) $b - 14 = -3$

3) $-3 = z - 8$

4) $a - 5 = 8$

5) $23 = y - 11$

6) $n - 4 = -11$

7) $26 = p - 61$

8) $t - 3.7 = 1.2$

Day 3.4- Solve the equation by subtracting.

1) $x + 7 = 12$

2) $-14 = k + 6$

3) $y + 9 = 0$

4) $6 + x = 4$

5) $-13 + t = 10$

6) $u + 9 = -5$

7) $b + 4 = 10$

WEEK 4.

Day 4.1- Solve the equation by multiplying.

1) $\frac{y}{2} = 13$

2) $\frac{y}{-3} = 8$

3) $\frac{x}{7} = 5$

4) $-8 = \frac{b}{8}$

5) $-7 = \frac{q}{11}$

6) $16 = \frac{p}{6}$

7) $\frac{3}{4}g = -12$

8) $8 = -\frac{2}{5}c$

Day 4.2- Solve the equation by dividing.

1) $2x = 18$

2) $-0.2x = 1.6$

3) $-60 = -5a$

4) $8t = -32$

5) $3x = 27$

6) $-5t = -45$

7) $4y = 52$

8) $5m = -10$

Day 4.3 - Solve two-step equations.

1) $7x + 12 = 26$

2) $2y + 9 = -5$

3) $11k + 9 = 42$

4) $-10 = 6b - 16$

5) $250 = 124 - 3e$

6) $1 = 2r + 9$

Day 4.4- Solve equations with like terms and parentheses.

1) $-25 + 4(2r + 5) = -61$

2) $2x - x + 1 = 5$

3) $17h - 47 + 6h = 160$

4) $2p + 8 + 4p = 128$

5) $2 - 5(h + 3) = -28$

6) $4(5 - p) = 8$

WEEK 5.

Day 5.1- Solve inequalities by adding or subtracting and graph.

1) $p + 6 < 12$

2) $z - 2 \geq -11$

3) $w + 3 \geq 4$

4) $a - 3 > 2$

5) $-5 + x \leq -20$

6) $-12 + q > 39$

Day 5.2- Solve inequalities by multiplying or dividing and graph.

1) $3b > 27$

2) $\frac{k}{3} > 6$

3) $5f > -40$

4) $\frac{b}{-2} \geq 8$

5) $9s > -18$

6) $\frac{w}{4} > 2$

Day 5.3 - Solve each multi-step inequalities and graph.

1) $160 + 4f < 500$

2) $m < 3m + 8$

3) $7 + 2t < 21$

4) $8x > 7x + 6$

5) $12 > 3x - 6$

6) $5t + 1 < -2t + 15$

Day 5.4- Solve each Multistep inequality show all your answer (4pts each)

1) $45 + 2b > 61$

2) $2 - (-14) > -4t$

3) $-4(x + 3) > 24$

WEEK 6.

Day 6.1- Use cross product property to solve the proportion

1. $\frac{6}{17} = \frac{3}{t}$

2. $\frac{t}{12} = \frac{20}{8}$

3. $\frac{8}{b} = \frac{32}{8}$

Day 6.2- Write each Fraction as a percent

1. $\frac{4}{5}$

2. $\frac{3}{25}$

Day 6.3 - Solve for X.

1) $\frac{2}{3} = \frac{20}{x}$

2) $\frac{x}{3} = \frac{30}{15}$

3) $\frac{5}{x} = \frac{20}{30}$

4) $\frac{2}{3} = \frac{24}{x}$

4) $\frac{2}{x} = \frac{3}{12}$

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

Day 6.4 - Write each decimal as a percent (2pts each)

1. 0.25

2. 0.03

3. 0.75

4. 0.88

5. 0.13

WEEK 7.

Day 7.1 - Find the percentage. Round off your answer to the nearest tenth of each percent if necessary.

1) What percent of 5 is 3?

2) What percent of 15 is 12?

3) 24 is what percent of 20?

4) What number is 0.5% of 200?

Day 7.2 - Find the percentage. Round off your answer to the nearest tenth of each percent if necessary.

1) What number is 15% of 105?

2) What is 6% of 2150?

3) What is 35% of 3000?

4) What is 3% of 1600?

5) 50 are what percent of 70?

6) 18 are what percent of 20?

.7) 40 are 20% of what number?

8) 16 are 30% of what number?

Day 7.3- Write each fraction as a percent (2pts each)

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

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

3. $\frac{2}{8}$

Day 7.4 - Simplify the expression.

1) $2^2 \cdot 2^0$

2. $p^4 \cdot p^5$

WEEK 8.

Day 8.1- Solve each problem

. Simplify:

5^0

2. Simplify:

$$2^3$$

3. Simplify:

$$4^{-1}$$

4. Simplify:

$$10^{-2}$$

Day 8.2- Simplify:

$$\left(5^2\right)^3$$

Simplify:

$$\left(a^4\right)^2$$

Day 8.3 -

Simplify:

$$\left(3\right)^2\left(3\right)^3$$

Simplify:

$$\frac{6^4}{6^2}$$

Simplify:

$$2^5(2)^{-3}$$

Simplify:

$$7^5(7)^{-3}$$

Day 8.4-

Simplify:

$$8^0(3)^{-2}$$

Simplify:

$$(x^3)^2$$

Simplify:

$$(x^{-2})^3$$

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