

Incoming 8th Grade Summer Math Packet

Welcome incoming students! This packet will help you retain the skills you learned in 7th grade so we can continue to build on these when you return in August!

This packet is due the 2nd week of school and will be GRADED on accuracy and completion. It will be one of your first grades of 8th grade! **You will also be tested on these skills when you return to school in August.**

Be sure to answer every question and SHOW ALL WORK. **No Work = NO CREDIT**

** If you are struggling with any of the skills in this packet, please search the for the skill topic (written in blue) on the Khan Academy website: <https://www.khanacademy.org/> or the Virtual Nerd website: <http://virtualnerd.com/pre-algebra/all/> You can also get extra practice on each skill from the IXL website: IXL.com. You can complete 10 questions a day without a membership.

INTEGERS (extra practice: IXL.com → 8th grade C.3 add and subtract and C.7 multiply and divide)

Addition:

SAME SIGNS: ADD and keep the same sign.

DIFFERENT SIGNS: SUBTRACT the smaller from the larger give the answer the sign of the larger number.

Subtraction:

ADD the opposite for the second number and use the Addition Rule. (ex: $-6 - 3 = -6 + -3 = -9$)

Multiplication & Division

Product or Quotient of TWO **same signs** is **positive**.

Product or Quotient of TWO **different signs** is **negative**.

**** You MUST know how to complete these problems WITHOUT a calculator! ****

$(+4) + (-7) =$	$(-8) \div (+2) =$	$(-9) - (-9) =$
$(-3) - (+6) =$	$(+6) + (-9) =$	$(-7) + (+2) =$
$(-1) \times (+9) =$	$(-8) \times (-6) =$	$(+4) \div (-2) =$
$(+5) \div (-5) =$	$(+4) - (-1) =$	$(-6) \times (+2) =$
$(-8) + (-6) =$	$(+6) \div (+3) =$	$(+8) + (-6) =$
$(+9) - (+9) =$	$(-5) + (-9) =$	$(-9) \div (+3) =$
$(-6) \div (+3) =$	$(+4) \times (-8) =$	$(+3) - (+9) =$
$(+3) + (+1) =$	$(-7) - (+2) =$	$(-1) \times (+6) =$
$(-8) \times (-7) =$	$(+9) \div (-1) =$	$(+5) + (+4) =$

ROUNDING DECIMALS

(extra practice: IXL.com → 7th grade D.3, Round decimals and mixed numbers)

1. Round 8.54 to the nearest tenth
2. Round 99.59 to the nearest whole number
3. Round 310.286 to the nearest tenth
4. Round 6.4 to the nearest whole number
5. Round 6.805 to the nearest hundredth
6. Round 9.765 to the nearest tenth
7. Round 118.387 to the nearest hundredth
8. Round 65.85 to the nearest whole number
9. Round 70.59 to the nearest tenth
10. Round 3.597 to the nearest hundredth

ORDER OF OPERATIONS – perform the operations in the correct order. SHOW ALL WORK!

(extra practice: IXL.com → 8th grade, C.8: Evaluate numerical expressions involving integers)

1. $(-1)^3 \cdot 7 + 4 =$
2. $(-6 + 8) \div -2 =$
3. $8 + 2 \cdot 6 - 5 =$
4. $9 - 4 + 2 - 1 + 8 =$
5. $10 \div 2 \cdot 4 \div 5 =$
6. $7 \cdot 3 + (2)^3 =$
7. $11 + 8(6 - 3) =$
8. $12 + 4(8 \div 2) =$

SOLVE PROPORTIONS

SHOW ALL WORK (extra practice: IXL.com → 8th grade, H.10: Solve Proportions)

1. $\frac{10}{8} = \frac{n}{4}$

4. $\frac{6}{7} = \frac{3}{n}$

7. $\frac{8}{12} = \frac{6}{n}$

2. $\frac{9}{6} = \frac{n+4}{10}$

5. $\frac{10}{n} = \frac{4}{2}$

8. $\frac{n}{4} = \frac{11}{6}$

3. $\frac{4}{n+1} = \frac{8}{4}$

6. $\frac{30}{6} = \frac{n}{2}$

9. $\frac{n-3}{5} = \frac{12}{8}$

COORDINATE PLANE

(extra practice: IXL.com → 8th grade, N.1 Coordinate Plane Review)

Graph and label the following ordered pairs on the given coordinate plane.

Point A (5, 1)

Point B (-3, -8)

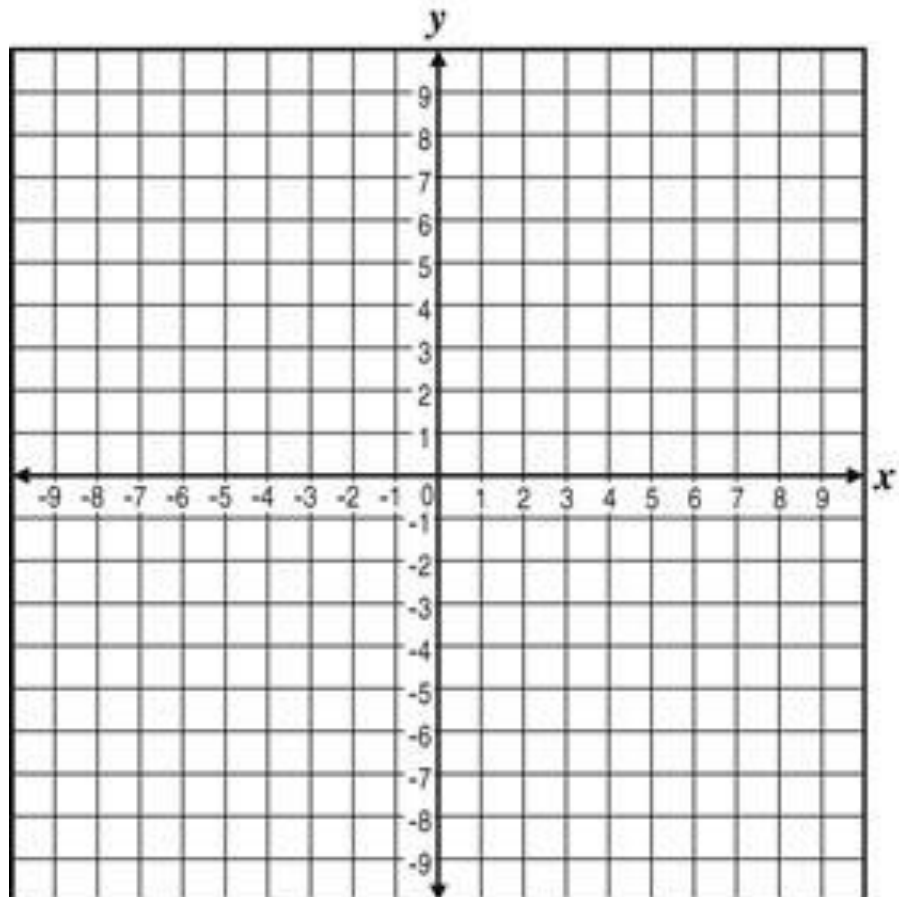
Point C (0, 6)

Point D (-7, 2)

Point E (9, 0)

Point F (4, -5)

Point G (-8, 0)



SOLVE EQUATIONS – solve for the variable. SHOW ALL WORK to earn credit.

(extra practice: IXL.com → 8th grade, W.7, W.8, W.9, W.10, W.11, W.12)

1. $x - 4 = 1$

2. $x + 3 = 9$

3. $3x = 15$

4. $\frac{x}{2} = 9$

5. $4x + 1 = -7$

6. $-3x + 9 = -6$

7. $\frac{x}{8} + 4 = 7$

8. $\frac{x}{2} - 10 = 3$

9. $5x - x + 4x = 24$

10. $3x + 6x - 7 = 10$

11. $16 + 5x = 8x - 5$

12. $-3x + 7 = 6x - 2$