



Rising 8th Grade Language Arts & Algebra I Honors Summer Assignments 2026

Language Arts

8th grade will select **one book** to read from the following list of books:

- *Restart* – Gordon Korman
- *The Seventh Most Important Thing* – Shelley Pearsall
- *Finding Mighty* – Sheela Chari.

When students have finished reading, they will need to create **3 different creative journal entries (pages)**. A creative journal entry is a notebook page with drawings and/or sketches along with the writing. Examples of creative journal entries are attached.

- Ideas include - setting, characters, plot, theme, and free-choice entries.
- Journal entries need to be completed on notebook paper and labeled.
- In order to receive full credit, each journal must include the following:
 - graphics with color
 - writing that includes text evidence
 - analysis (thought prompts)
- Entries should be detailed, thoughtful, and creative.

Students will submit their journals for credit on the first day of school in August, worth 60 points. They should also bring their book with them to school for the first week, as we will be discussing the books in class.

Choice Reading: While students are only required to read one book, reading all summer long is encouraged. Choose novels that interest you and are on your reading level. It is good to challenge yourself a little! Remember, reading is the single most important factor in student success.

Algebra I Honors

Summer math is assigned to help students retain math skills and enable the math classes to spend less time reviewing past material and forge ahead with new math skills. It has been designed to review topics students learned during the past school year, which are crucial for success in the next grade level.

All students are expected to complete the entire Summer Skills packet to the *best of their ability*. Students should show their work so we can see the thought process used to complete the problems.



or



your final answer. Please keep in mind that we are looking for a *good effort* at completing the problems, more than a correct answer. Good effort includes attempting the problems and showing the work/thought process used to achieve an answer. A pacing suggestion would be to complete 2 - 3 pages a week. **This assignment is due Wednesday, August 12th, the first day of the new school year, and is worth 50 points.**

Here's a list of highly recommended authors for middle school readers (grades 6–8), across genres and interests. These authors are known for engaging plots, relatable characters, and age-appropriate themes:

Realistic Fiction

- **Jason Reynolds** – *Ghost*, *Look Both Ways*
- **Sharon Draper** – *Out of My Mind*, *Blended*
- **Jacqueline Woodson** – *Brown Girl Dreaming*, *Harbor Me*
- **Gordon Korman** – *Restart*, *Ungifted*
- **R.J. Palacio** – *Wonder*

Historical Fiction

- **Ruta Sepetys** – *Between Shades of Gray*, *Salt to the Sea*
- **Lauren Tarshis** – *I Survived* series (accessible for younger or reluctant readers)
- **Alan Gratz** – *Refugee*, *Ground Zero*, *Prisoner B-3087*
- **Pam Muñoz Ryan** – *Esperanza Rising*, *Echo*

Fantasy / Science Fiction

- **Rick Riordan** – *Percy Jackson* series, *Heroes of Olympus*
- **Tamora Pierce** – *Song of the Lioness*, *The Circle of Magic*
- **Eoin Colfer** – *Artemis Fowl* series
- **Tui T. Sutherland** – *Wings of Fire* series
- **Brandon Mull** – *Fablehaven*, *Beyonders*

Mystery / Adventure

- **Stuart Gibbs** – *Spy School*, *FunJungle*
- **Trenton Lee Stewart** – *The Mysterious Benedict Society*
- **Jennifer Nielsen** – *The False Prince*, *Resistance*
- **Anthony Horowitz** – *Alex Rider* series

Graphic Novels

- **Raina Telgemeier** – *Smile*, *Drama*, *Guts*
- **Gene Luen Yang** – *American Born Chinese*, *Dragon Hoops*
- **Victoria Jamieson** – *Roller Girl*, *When Stars Are Scattered*
- **Jerry Craft** – *New Kid*, *Class Act*

Poetry / Novels in Verse

- **Kwame Alexander** – *The Crossover*, *Booked*
- **Nikki Grimes** – *Garvey's Choice*, *Bronx Masquerade*

7th and 8th Grade Samples

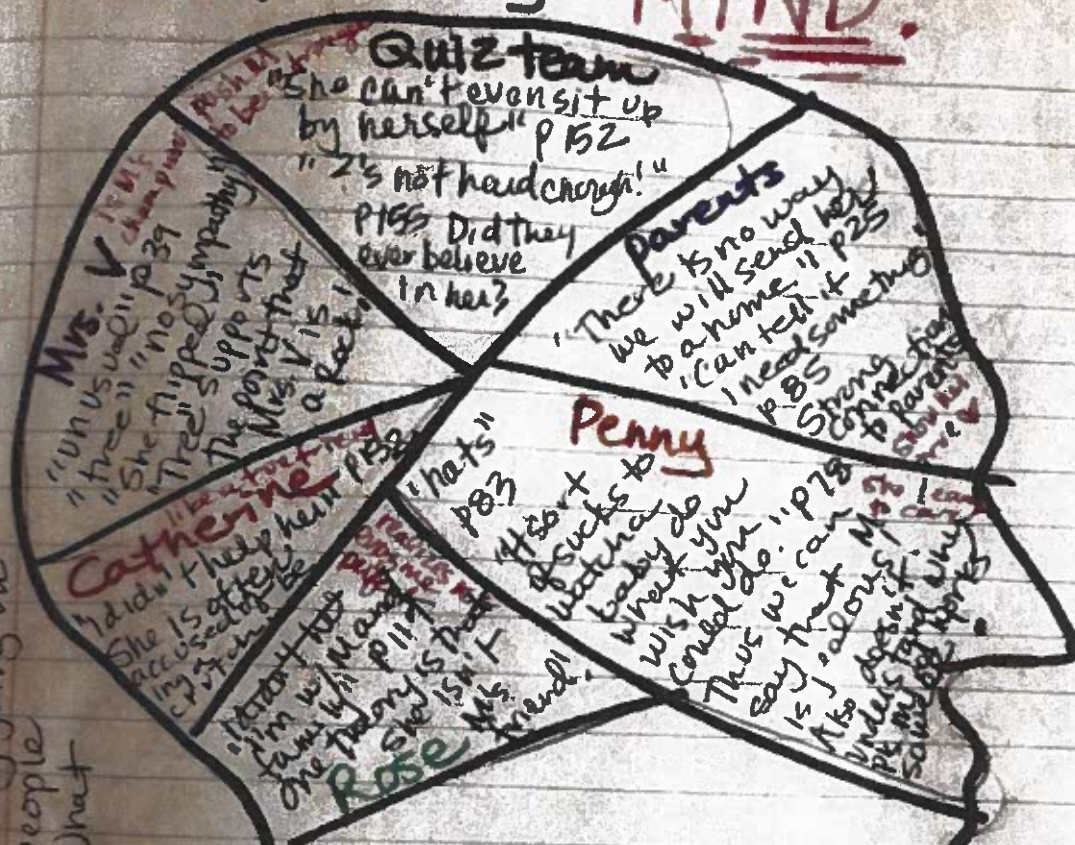
Comparing 2 characters:

	Rosa	Jessica
Both have Freedom but in different ways	• philosophical • Hopeful • Kind • Contained • trapped • Smart	• Kind • Free • athletic • hopeful • happy

Rosa and Jessica are very alike and different at the same time. They are similar in the physical way that they both have disabilities but, are different in the way they think and that Rosa is not free. One theory is that Rosa is such a philosophical thinker because she has been trapped in her mind. This is where she finds her freedom to roam pondering questions like "where does mind live?" Jessica though she has lost a leg is still free to roam in real life giving her not as much time to have internal thoughts like Rosa.



OUT of MY MIND!



How does Melody truly feel about all the people in her life? What is really going on in her mind. Are these people positive or negative? What is their influence?

When I first read OOMM,
I thought people in Melody's
life had clear negative or
positive influences on M.
But now when I look
deeper, I realize that
all parties had a
positive impact on
M even if it's hard
to see! See pink
for + impact!

Symbolism: Chapters 16-19 4/17/16

Benin Home



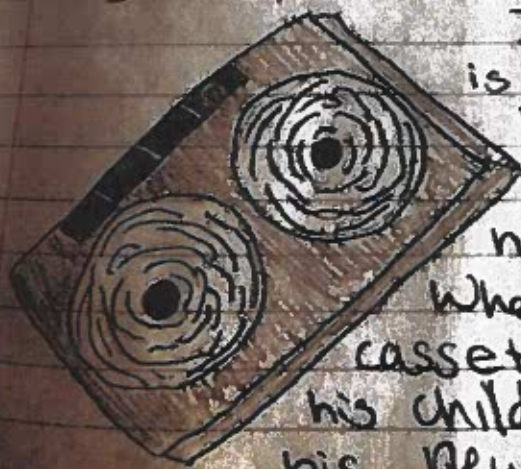
Benin Home symbolized Beah's life as a boy soldier ending. It tried to civilize the boys, however, you can take a boy out of a war, but you can't take the war out of a boy.

Esther

Esther symbolizes Beah's end to his psychological war. I believe this because everytime Esther treated Beah, he would not tell her his name. However, on page 153 Beah finally opened up to Esther, by telling her his name. This shows Beah is finally learning how to trust people again, and forgive himself of what he has done.



Cassette



Ishmael Beah's cassette is a symbol of his childhood. For example, when Beah was little, music brought his brother and friends together. When the soldier threw Beah's cassette into the fire, it represented his childhood being destroyed and his new life as a boy soldier.

Name: _____ Date: _____

Summer Reading Project

	Points Earned	Points Possible
Journal Entry #1		
• Color		3
• Graphics		3
• Text Evidence		7
• Thought Prompts/Analysis		7
Journal Entry #2		
• Color		3
• Graphics		3
• Text Evidence		7
• Thought Prompts/ Analysis		7
Journal Entry #3		
• Color		3
• Graphics		3
• Text Evidence		7
• Thought Prompts/Analysis		7
TOTAL		60

**RISING 8TH
GRADE
ALGEBRA 1
HONORS**

**SUMMER
MATH PACKET**



Adding and Subtracting Integers

Adding Integers:

Same sign: Add and keep the sign.

Example: $(-4) + (-5) = (-9)$

Different Signs: Subtract and keep sign of the larger number.

Example: $(-6) + 8 = 2$

Subtracting Integers:

Instead of "subtracting", add the opposite. Then use the addition rules.

Examples:

$(-5) - 9$ becomes $(-5) + (-9)$

$10 - (-7)$ becomes $10 + 7$

$(-3) - (-6)$ becomes $(-3) + 6$

1. $(-6) + 1$	2. $2 + (-3)$
3. $7 - (-6)$	4. $(-8) + 6$
5. $(-7) + (-1)$	6. $(-7) - 4$

7. $1 - (-6) - 5$	8. $(-4) - 8 + (-7)$
9. $(-6) + 6 - (-8)$	10. $(-8) - (-6) - 8$
11. $6 - (-8) + (-5)$	12. $(-8) - (-8) - (-5)$
13. $(-6) - (-1) + (-8) + (-7)$	14. $(-5) + 8 + (-6) + (-1)$

Multiplying and Dividing integers

Same signs = POSITIVE

Different Signs = NEGATIVE

THAT'S IT 😊

EXAMPLES:

$$(-4)(-5) = 20$$

$$(3)(-6) = -18$$

$$(-2)(-7) = 14$$

$$(-8)(10) = -80$$

1. $(-8)(-8)$

2. $(-7)(8)$

3. $(-4)(-2)$

4. $(5)(-4)$

5. $(-6)(-1)(2)$

6. $(2)(-3)(4)$

7. $-30 \div 3$	8. $-56 \div -8$
9. $49 \div -7$	10. $-36 \div -6$
11. $-14 \div 7$	12. $-45 \div -9$
13. $(-15) \div (3)(-2)$	14. $(-4)(3) \div ((-6)(-1))$

Order of Operations

- Parenthesis
- Exponents
- Multiplication / Division*
- Addition / Subtraction*

**In the order that it appears*

$$5 \times (4 \times 6 - 4^2)$$

$$5 \times (4 \times 6 - 16)$$

$$5 \times (24 - 16)$$

$$5 \times (8)$$

$$40$$

1. $(4 - 2) \times 4 \times 5$

2. $5 + (3 + 3)^2$

3. $3 \times 3 - 4 \div 2$

4. $16 \div (5 - 3)^2$

5. $3 \times 4 \div 2^2$

6. $(8 - 4) \div (2 + 2)$

7. $6^2 - (5 + 2 - 3)$	8. $3 \div (2^2 - 1^3)$
9. $(16 - 1) \div 3 \times 3 + (4 \div 2)^3$	10. $4 \div (5 - (4 - 1)) + 3^2 + 6$
11. $1 + 14 \div 7 + (6 + 2)^2$	12. $((24 \div 6)^2 - (6 + 5)) \times 3$
13. $(21 \times 3) \div (9 - (2^2 - 2))$	14. $28 \div (5 - (9 - 8)) + 3^2$

Evaluating Expressions

- Substitute the value of the variable, in place of the variable.

- Use the order of operations to evaluate.

$$x^2 + z \div 3; \text{ when } x = 1 \text{ and } z = 3$$

$$(1)^2 + 3 \div 3$$

$$1 + 3 \div 3$$

$$1 + 1$$

$$2$$

1. $h + 3i$; when $h = 1$ and $j = 5$

2. $y - (x - 2)$; when $x = 4$ and $y = 6$

3. $a + b + a$; when $a = 3$ and $p = 2$

4. $y + x \div 5$; when $x = 5$ and $y = 1$

5. $m^2 + p^2$; when $m = 6$ and $p = 2$

6. $b + b + a \div 4$; when $a = 4$ and $b = 3$

7. $nm + n - 2$; when $m = 6$ and $n = 3$	8. $y^2 + 2 - x$; when $x = 1$ and $y = 6$
9. $h + j^2 - 3$; when $h = 4$ and $j = 3$	10. $(5 - z)(y + 6)$; when $y = 1$ and $z = 2$
11. $h + jh^2$; when $h = 3$ and $j = 6$	12. $(yx)^2 \div 6$; when $x = 6$ and $y = 2$
13. $m + 3 + n^2$; when $m = 1$ and $n = 6$	14. $3m(5 + p)$; when $m = 2$ and $p = 1$

One-Step Equations

Do the inverse (opposite) of whatever operation is being performed to the variable, on both sides. Get the variable by itself.

$$\begin{array}{r} x + 4 = 11 \\ -4 \quad -4 \end{array}$$

$$x = 7$$

1. $n - 2 = -16$	2. $90 = -15m$
3. $-13 + x = 7$	4. $13 = n - 1$
5. $n - 20 = -30$	6. $-60 = -10n$
7. $11 + x = -9$	8. $-15 = \frac{r}{4}$
9. $\frac{x}{3} = 14$	10. $24 = 5 + v$

TWO-STEP Equations

Get the variable by itself.

Example:

- 1) Using an inverse operation, get rid of the number NOT connected to the variable using addition or subtraction.

$$\begin{array}{rcl} 3x - 4 & = & 11 \\ +4 & & +4 \end{array}$$

- 2) Using an inverse operation, get rid of the number connected to the variable using multiplication or division.

$$\begin{array}{rcl} 3x & = & 15 \\ \hline 3 & & 3 \\ x & = & 5 \end{array}$$

1. $3v + 3 = -12$

2. $13 = \frac{x}{2} + 4$

3. $-9 + \frac{r}{8} = -8$

4. $-3 - 3n = -42$

5. $\frac{k-6}{3} = 2$

6. $2 + \frac{p}{5} = -1$

7. $5 + 4n = 85$

8. $-88 = 8x + 8$

9. $\frac{n+4}{3} = -5$

10. $12 = 5 + \frac{x}{2}$

11. $57 = 8 - 7x$

12. $9 + \frac{n}{9} = 10$

DISTRIBUTIVE PROPERTY


$$a(b+c) = ab+ac$$

Examples:

1. $3(x+5) = 3x+15$

2. $-5(2m-10) = -10m+50$

1. $2(3p - 5)$	2. $-5(3r + 6)$
3. $3(-2s - 9)$	4. $7(2x - 11)$
5. $-4(-4y + 8)$	6. $6(3k - 10)$
7. $-3(12m - 4)$	8. $10(-9f - 5)$
9. $6(-2x + 6y)$	10. $-7(11a - 2b)$

Combining Like Terms

Add terms that have the same variable, and same exponent. Add constants together.

$$\begin{array}{c}
 3x + 5 - 9x - 2 \\
 \boxed{3x} + \boxed{5} - \boxed{9x} - \boxed{2} \\
 -6x + 3
 \end{array}$$

1. $-5n - 5 - n + 6$	2. $a - 5 - 4 + 5a$
3. $1 + 3n - n + 5$	4. $k + 8 + 3k + 3$
5. $-6 + 5x + x - 5$	6. $a - 6 - 9a + 1$
7. $-4x - 10(x + 6)$	8. $2(1 - 5a) - 10a$
9. $-10a + 2(a - 8)$	10. $10(x + 1) - 4(2 - 3x)$

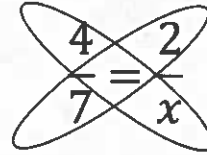
PROPORTIONS

1) Cross multiply

2) Divide to isolate the variable.

3) Reduce answer to simplest form.

Example:


$$\frac{4}{7} = \frac{2}{x}$$

$$4x = 14$$

$$x = \frac{14}{4} = \frac{7}{2}$$

1. $\frac{2}{5} = \frac{m}{6}$

2. $\frac{n}{7} = \frac{6}{10}$

3. $\frac{9}{10} = \frac{n}{2}$

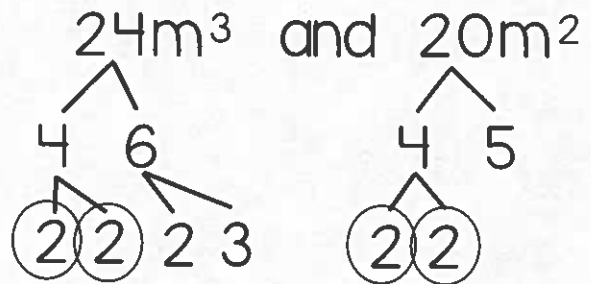
4. $\frac{2}{10} = \frac{10}{k}$

5. $\frac{5x}{2} = \frac{9}{10}$

6. $\frac{n}{9} = \frac{2}{7}$

Greatest Common Factor

- Identify the largest common factor in both coefficients. You can make a factor tree if needed.
- Identify which variables they have in common and the largest exponent that they BOTH have.



GFC: $4m^2$

1. $18u, 20u$

2. $28x, 21y^2$

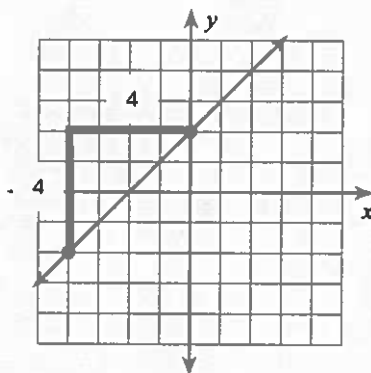
3. $27n^2, 15n$

4. $24y, 12y^2$

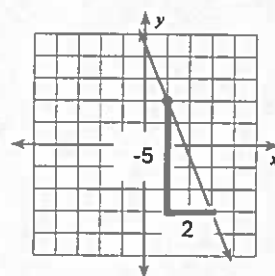
SLOPE OF A LINE

Slope: $\frac{\text{RISE}}{\text{RUN}} = 4$

Slope: $\frac{4}{4} = 1$

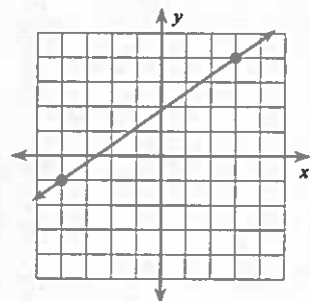


* Slopes can be positive or negative

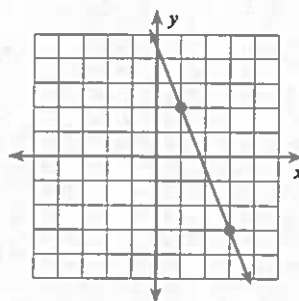


Slope: $-\frac{5}{2}$

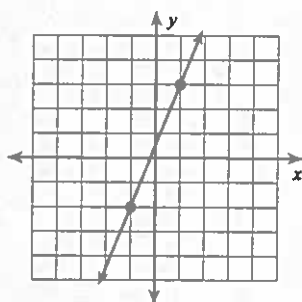
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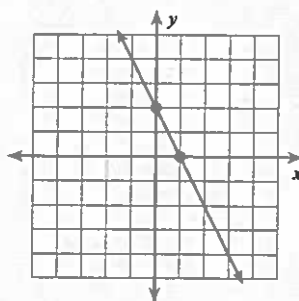
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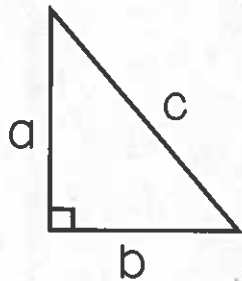
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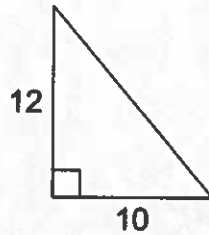
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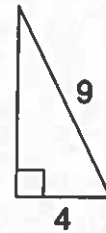
Pythagorean Theorem



$$a^2 + b^2 = c^2$$

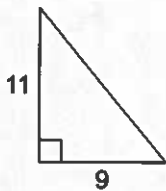


$$\begin{aligned} 10^2 + 12^2 &= c^2 \\ 100 + 144 &= c^2 \\ 244 &= c^2 \\ \sqrt{244} &= c = 15.6 \end{aligned}$$

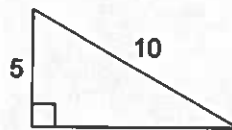


$$\begin{aligned} a^2 + 4^2 &= 9^2 \\ a^2 + 16 &= 25 \\ a^2 &= 9 \\ a &= \sqrt{9} = 3 \end{aligned}$$

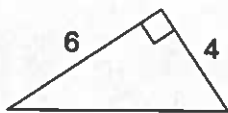
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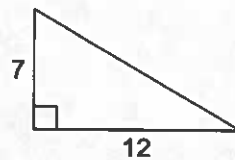
2.



3.



4.



Adding and Subtracting Fractions

** To add and subtract fractions, you must have a common denominator.

Finding a Common Denominator -

The denominator is the bottom of the fraction. Find the Least Common Multiple of the two denominators (smallest number both denominators go into evenly). Whatever you have to multiply the bottom by to get that number, also multiply the top.

- After finding the common denominator, add the numerators and KEEP the denominator. Reduce fraction to simplest terms.

Examples:

$$\frac{3}{4} + \frac{5}{6} \quad \text{** LCM of 4 and 6 is 12.}$$

$$\frac{3 \cdot 3}{4 \cdot 3} + \frac{5 \cdot 2}{6 \cdot 2} = \frac{9}{12} + \frac{10}{12} = \frac{19}{12}$$

$$\frac{7}{10} - \frac{8}{15} \quad \text{** LCM of 10 and 15 is 30.}$$

$$\frac{7 \cdot 3}{10 \cdot 3} - \frac{8 \cdot 2}{15 \cdot 2} = \frac{21}{30} - \frac{16}{30} = \frac{5}{30} = \frac{1}{6}$$

1. $\frac{8}{7} + \frac{5}{3}$

2. $\frac{1}{2} - \frac{2}{5}$

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

4. $\frac{3}{4} + \frac{5}{7}$

5. $\frac{1}{2} - \frac{3}{8}$

6. $\frac{10}{7} + \frac{3}{2}$

7. $\frac{7}{5} + \frac{3}{2}$

8. $\frac{4}{5} - \frac{1}{2}$

9. $\frac{3}{4} + \frac{5}{12}$

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

11. $\frac{5}{8} + \frac{1}{3}$

12. $\frac{13}{11} - \frac{4}{5}$

Name: _____

Multiplying and Dividing Fractions

Directions: Multiply or divide fractions. Write answer in reduced improper form.

Example: $\frac{3}{5} \times \frac{5}{9}$

- Multiply straight across the top and the bottom.
- Reduce your answer

$$\frac{3}{5} \times \frac{5}{9} = \frac{15 \div 15}{45 \div 15} = \frac{1}{3}$$

Example: $\frac{4}{5} \div \frac{1}{3}$

- Flip the second fraction and multiply

$$\frac{4}{5} \times \frac{3}{1} = \frac{12}{5}$$

1. $\left(\frac{2}{5}\right)\left(\frac{1}{4}\right)$	2. $\left(\frac{1}{2}\right)\left(-\frac{7}{5}\right)$
3. $\left(\frac{5}{6}\right)\left(\frac{8}{5}\right)$	4. $\left(\frac{2}{7}\right)\left(-\frac{1}{2}\right)$
5. $\left(\frac{7}{4}\right)\left(\frac{6}{5}\right)$	6. $\left(-\frac{6}{5}\right)\left(-\frac{2}{3}\right)$

7. $\left(-\frac{11}{8}\right)\left(-\frac{2}{3}\right)$	8. $\left(\frac{3}{5}\right)\left(\frac{5}{4}\right)$
9. $\left(\frac{-3}{4}\right) \div \frac{4}{5}$	10. $\left(\frac{-11}{8}\right) \div \frac{1}{5}$
11. $\frac{3}{2} \div \left(\frac{-2}{3}\right)$	12. $\frac{2}{5} \div \left(\frac{-5}{8}\right)$
13. $\left(\frac{-8}{9}\right) \div \left(\frac{-3}{5}\right)$	14. $\left(\frac{-7}{5}\right) \div \frac{2}{3}$
15. $\frac{7}{5} \div \frac{8}{5}$	16. $\left(\frac{-5}{4}\right) \div \frac{5}{3}$

PERCENTS

What is 15% of 40?

$$\frac{\text{part}}{\text{Whole}} = \frac{\text{Percent}}{100}$$

$$\frac{\text{part}}{40} = \frac{15}{100}$$

$$100x = 600$$

$$x=6$$

*You will always be missing one of the 4 parts of the proportion. Fill in the 3 knowns and the missing part is your variable. Cross multiply to solve.

1. 35% of 37 is what?

2. 3.8 is what percent of 21?

3. 7.9 is 97% of what?

4. 23 is what percent of 39?