

Lesson 81

Skills:

- Learn keyboarding skills: L, S, ;, A.
- Diagram a sentence.
- Identify a predicate adjective.
- Expand comprehension by analyzing and interpreting information in text.
- Understand foreshadowing.
- Conduct an experiment with magnets.
- Use the scientific method.
- Follow written directions to draw an animal.
- Divide fractions.
- Reduce fractions to lowest terms.
- Convert a fraction to a decimal number and write it as a percent.
- Use the order of operations to simplify an expression.
- Follow written instructions.

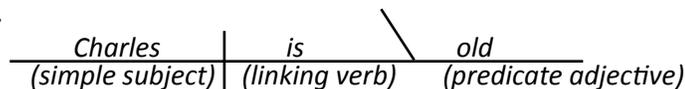
Materials:

- ❖ Computer
- ❖ Magnets
- ❖ Piece of foam at least one inch larger than the bar magnet
- ❖ Non-metal container of water
- ❖ Small compass
- ❖ *Crenshaw*, by Katherine Applegate
- ❖ Worksheets 73a, 81, 81a, 81b

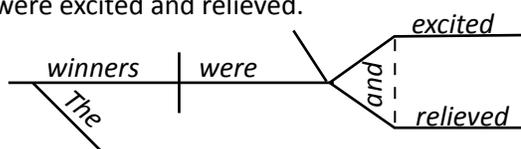
Language Arts/Science/Art/Bible:

- ❖ Worksheet 81, part A: A predicate adjective is diagrammed the same way a predicate nominative is diagrammed.

Charles is old.



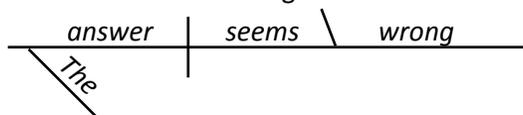
The winners were excited and relieved.



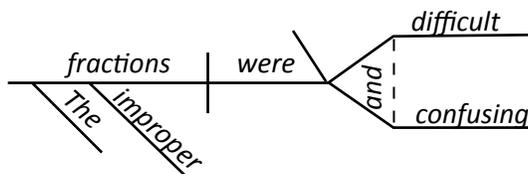
- Have the child diagram the sentences.

Answers:

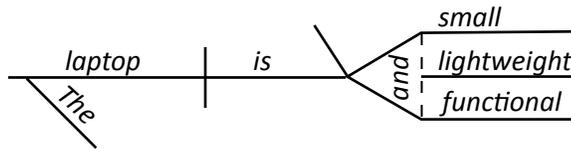
- 1) The answer seems wrong.



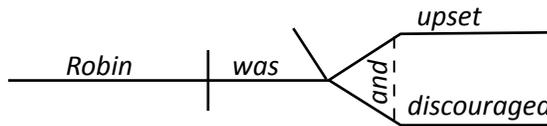
- 2) The improper fractions were difficult and confusing.



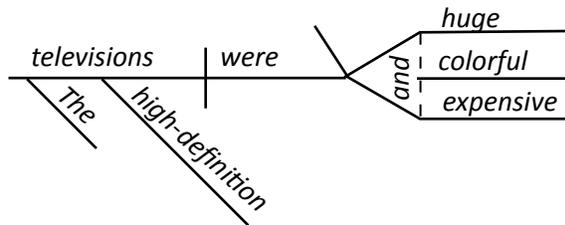
3) The laptop is small, lightweight, and functional.



4) Robin was upset and discouraged.



5) The high-definition televisions were huge, colorful, and expensive.



❖ Worksheet 81, part B: Have the child read *Crenshaw*, chapters 32-36, and then answer the questions.

Answers:

- 1) *When Crenshaw appears, unpleasant or unwanted events are about to happen.*
 - 2) *Answers will vary. If your child feels like Jackson's parents should have told him about moving, ask your child how much information he feels is appropriate for a fifth grader to know. Should Jackson's parents have told him the extent of the financial difficulties or only that they would need to leave their apartment for financial reasons?*
 - 3) *It means if someone is determined to do something, he will find a way to accomplish it regardless of obstacles.*
- 4-9) *Answers will vary. Discuss your child's answers and his reasons for his beliefs.*

❖ Review the unit verses: 'For I was hungry and you gave me something to eat, I was thirsty and you gave me something to drink, I was a stranger and you invited me in, I needed clothes and you clothed me, I was sick and you looked after me, I was in prison and you came to visit me.' "Then the righteous will answer him, 'Lord, when did we see you hungry and feed you, or thirsty and give you something to drink? When did we see you a stranger and invite you in, or needing clothes and clothe you? When did we see you sick or in prison and go to visit you?' "The King will reply, 'Truly I tell you, whatever you did for one of the least of these brothers and sisters of mine, you did for me' (Matthew 25:35-40).

❖ Worksheet 81, part C: Have the child follow the instructions to draw Crenshaw.

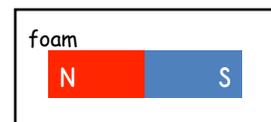
❖ Worksheet 81, part D: Have the child use the scientific method to see if a magnet functions as a compass. Have him fill in the missing information.

♦ In which direction does a compass point? (*geographic north*)

- Step One: Ask a question. (*Does a magnet functions as a compass?*)
- Step Two: Gather information and form a hypothesis.
- Step Three: Test the hypothesis.

♦ Materials:

- Bar magnet
- Piece of foam at least one inch larger than the bar magnet
- Non-metal container of water
- Small compass



♦ Experiment variables: Have the child list the variables for this experiment. *Possible answers:*

- Independent variable: *magnet*
- Dependent variable: *direction indicated*
- Control variables: *magnet size, type, and shape, type of container, amount of water, speed of turning container, compass*

- ◆ Test procedure:
 - Tape the bar magnet to the piece of foam.
 - Place the foam in the container of water.
 - Hold the container of water, and turn in all directions.
 - Test your results using a compass.
- ◆ Record observations.
- ◆ Change a control variable.
 - Test to see if the shape or size of a magnet affects its ability to function as a compass.
 - Test to see if a temporary magnet functions as a compass.
- Step Four: Draw a conclusion.
- Step Five: Report the results. Have the child draw a diagram of the placement of the magnet on the water. Draw a diagram of the ending position of the magnet on the water.
- ❖ Worksheet 81a, keyboarding lesson 3: Have the child complete the practice exercises.
 - ◆ Warm up
 - ◆ Practice L and S
 - ◆ Practice ; and A
 - ◆ Review practice: Includes letters previously learned
- Have the child record the number of correct “words”, total “words”, and completion time from each practice exercise.
- Have the child write a fraction representing the ratio of the number of correct words to the total number of words.
- Have the child calculate the percentage of words correct.
- How do his daily statistics compare to the previous day?

Math:

- ❖ Worksheet 81b, part A: To find the reciprocal of a fraction, exchange the numerator and the denominator.

<u>Number</u>	<u>Reciprocal</u>
$\frac{4}{5}$	$\frac{5}{4}$

Hint: flip the fraction.

A number and its reciprocal have a product of one. $\frac{4}{5} \cdot \frac{5}{4} = 1$

- Have the child write the reciprocal of each number, and then multiply the numbers to verify that the product equals one. Remember that an integer can be written as a fraction with a denominator of 1.

Answers:

Number	Reciprocal	Product
$\frac{4}{5}$	$\frac{5}{4}$	$\frac{4}{5} \cdot \frac{5}{4} = 1$
$\frac{2}{9}$	$\frac{9}{2}$	$\frac{2}{9} \cdot \frac{9}{2} = 1$
$\frac{8}{11}$	$\frac{11}{8}$	$\frac{8}{11} \cdot \frac{11}{8} = 1$
$\frac{1}{7}$	$\frac{7}{1}$	$\frac{1}{7} \cdot \frac{7}{1} = 1$
$\frac{6}{13}$	$\frac{13}{6}$	$\frac{6}{13} \cdot \frac{13}{6} = 1$

Multiplication and division are inverse operations. They undo each other.

$$\frac{2}{9} \cdot \frac{1}{7} = \frac{2}{63} \longrightarrow \frac{2}{63} \div \frac{1}{7} = \frac{2}{9}$$

Multiplying by the reciprocal gives the same result as dividing.

$$\frac{2}{63} \div \frac{1}{7} = \frac{2}{9} \qquad \frac{2}{63} \cdot \frac{7}{1} = \frac{2 \cdot 7}{63 \cdot 1} = \frac{14}{63} \xrightarrow{\text{Reduce to lowest terms.}} \frac{2}{9}$$

* Remember the fun trick to reduce fractions:

- Write the numerator and denominator as a product of prime factors.

$$\frac{14}{63} = \frac{2 \cdot \cancel{7}}{3 \cdot 3 \cdot \cancel{7}} = \frac{2}{9}$$

- Or if you can “see” the common factor, cancel it out during the multiplication process.

$$\frac{\cancel{2} \cdot \cancel{7}^1}{\cancel{6}^1 \cdot 3 \cdot 1} = \frac{2}{9}$$

- ❖ Worksheet 81b, part B: Have the child divide the fractions and reduce the product to lowest terms when needed.

Answers:

$$1) \frac{2}{3} \div \frac{5}{9} =$$

$$\frac{2}{\cancel{3}^1} \cdot \frac{\cancel{9}^3}{5} = \frac{6}{5}$$

$$2) \frac{7}{8} \div \frac{3}{10} =$$

$$\frac{7}{\cancel{8}^4} \cdot \frac{\cancel{10}^5}{3} = \frac{35}{12}$$

$$3) \frac{5}{12} \div \frac{5}{6} =$$

$$\frac{\cancel{5}^1}{\cancel{12}^2} \cdot \frac{\cancel{6}^1}{\cancel{5}^1} = \frac{1}{2}$$

$$4) \frac{3}{11} \div \frac{4}{7} =$$

$$\frac{3}{11} \cdot \frac{7}{4} = \frac{21}{44}$$

$$5) \frac{3}{16} \div \frac{3}{4} =$$

$$\frac{\cancel{3}^1}{\cancel{16}^4} \cdot \frac{\cancel{4}^1}{\cancel{3}^1} = \frac{1}{4}$$

$$6) \frac{2}{5} \div \frac{5}{16} =$$

$$\frac{2}{5} \cdot \frac{16}{5} = \frac{32}{25}$$

- ❖ Worksheet 81b, part C: Have the child convert each fraction to a decimal number and then write it as a percent.

Answers:

$$1) 4/8 = 0.5 = 50\%$$

$$2) 3/15 = 0.2 = 20\%$$

$$3) 5/12 = 0.41666... = 41.7\%$$

$$4) 2/6 = 0.333... = 33.3\%$$

$$5) 7/10 = 0.7 = 70\%$$

$$6) 9/12 = 0.75 = 75\%$$

- ❖ Worksheet 81b, part D: Have the child use the order of operations to simplify each expression. He should work from left to right.

Answers:

What is the order of operations in math? (*parentheses, exponents, multiplication, division, addition, subtraction*)

$$1) 11 + 6 \cdot 2 - 9 \div 3 =$$

$$11 + 12 - 3 =$$

$$23 - 3 = 20$$

$$2) 12 + 8 \cdot 6 - 15 \div 5 =$$

$$12 + 48 - 3 =$$

$$60 - 3 = 57$$

$$3) 65 - 4 \cdot 12 + 27 \div 3 =$$

$$65 - 48 + 9 =$$

$$17 + 9 = 26$$

$$4) 13 \cdot 11 + 17 - 288 \div 9 =$$

$$143 + 17 - 32 =$$

$$160 - 32 = 128$$

$$5) 225 \div 5 - 4 + 14 \cdot 8 =$$

$$45 - 4 + 112 =$$

$$41 + 112 = 153$$

$$6) 4,301 - 23 \cdot 2 + 7 \cdot 8 =$$

$$4,301 - 46 + 56 =$$

$$4,255 + 56 = 4,311$$

$$7) 24 - (7 - 5) \cdot 6 \div 2 =$$

$$24 - 2 \cdot 6 \div 2 =$$

$$24 - 6 = 18$$

$$8) 56 \div 4(8 - 6) + 4 =$$

$$56 \div 4(2) + 4 =$$

$$56 \div 8 + 4 =$$

$$7 + 4 = 11$$

$$9) \frac{11}{18} - \frac{2}{3} \cdot \frac{1}{5} \div \frac{4}{5} - \frac{1}{3} =$$

$$\frac{11}{18} - \frac{2}{15} \div \frac{4}{5} - \frac{1}{3} =$$

$$\frac{11}{18} - \frac{\cancel{2}^1}{\cancel{15}^3} \cdot \frac{\cancel{5}^1}{\cancel{4}^2} - \frac{1}{3} =$$

$$\frac{11}{18} - \frac{1}{6} - \frac{1}{3} =$$

$$\frac{11}{18} - \frac{3}{18} - \frac{6}{18} = \frac{2}{18} = \frac{1}{9}$$

$$10) 842.702 + 8.6 \cdot 3.4 - 15.3 \div 3 =$$

$$842.702 + 29.24 - 5.1 =$$

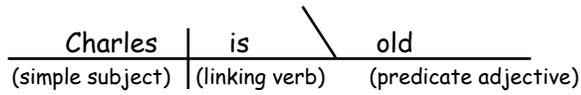
$$871.942 - 5.1 = 866.842$$

name _____

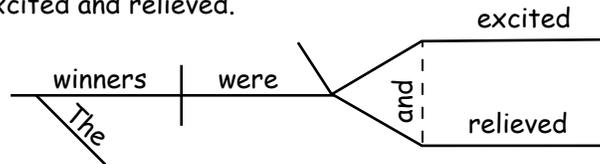


Part A: A predicate adjective is diagrammed the same way a predicate nominative is diagrammed.

Charles is old.

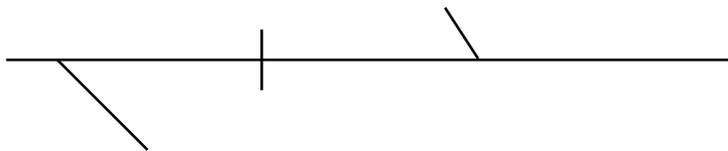


The winners were excited and relieved.

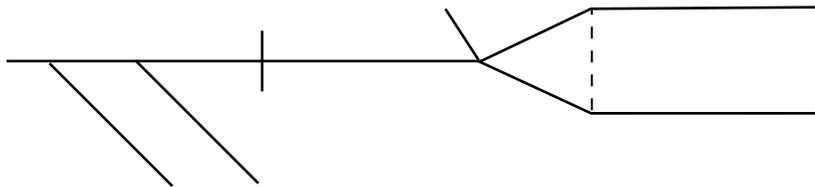


• Diagram the sentences.

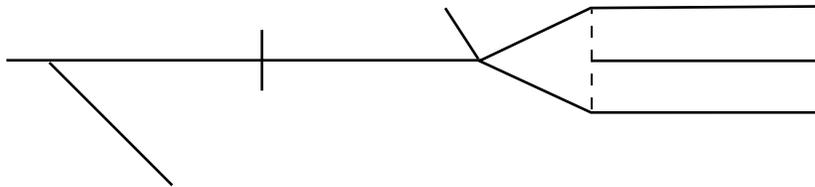
1) The answer seems wrong.



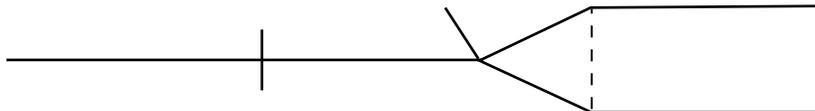
2) The improper fractions were difficult and confusing.



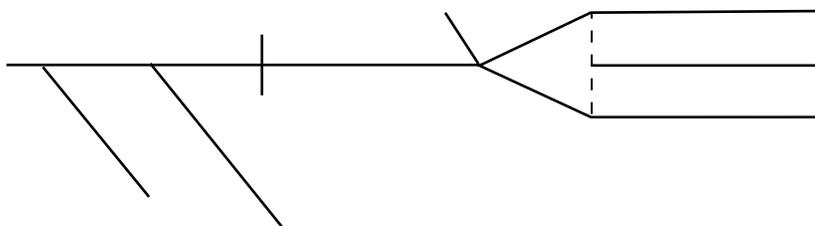
3) The laptop is small, lightweight, and functional.



4) Robin was upset and discouraged.



5) The high-definition televisions were huge, colorful, and expensive.



Part B: Read *Crenshaw*, chapters 32-36. Answer the questions.

1) How does the author use *Crenshaw* to foreshadow upcoming events in the story?

2) Jackson felt like his parents could talk to him about grown-up stuff and that they should have told him the truth about moving. Do you think they should have? Why or why not?

3) Jackson's dad said, "Where there's a will there's a way." What do you think this expression means?

4) Why do you think *Crenshaw* appeared to Jackson in Best Buy?

5) Have you ever been tempted to steal something? If so, explain why and describe the outcome.

6) Do you believe it is always wrong to steal? Or do you feel it is justified in some situations? Explain your answer.

7) Leviticus 19:11 says, "Do not steal. Do not lie. Do not deceive one another." How does this verse apply to your reasoning about stealing? What other verses do you know that tell us not to steal or lie?

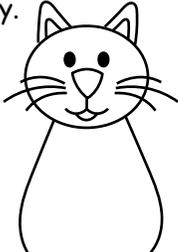
8) Jackson felt crummy about stealing, but even worse about lying. He states numerous times in the story how opposed he is to lying, yet he does it himself at times. Why do you think he lies?

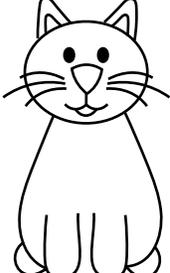
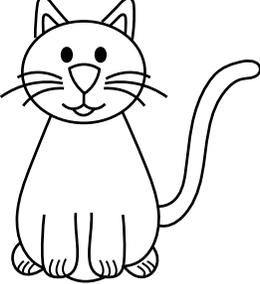
9) List at least three advantages and three disadvantages to having a television in your home.

Advantages

Disadvantages

Part C: Draw Crenshaw below the instructions.

- Draw an oval for the head. 
- Draw rounded triangles for ears and a triangle for the nose. 
- Draw a smaller triangle inside each ear. Make two solid ovals for eyes. 
- Draw a short, straight line down from the bottom of the nose. Make a curve on both sides for the mouth. Draw a curve under the double curve. 
- Draw three whiskers on both sides of the face. 
- Draw the curved body. 

- Draw the legs.
 - ♦ Draw two long front legs.
 - ♦ Add small hind legs to both sides of the body.
- Draw a small curve to complete the bottom of the body. Draw a tail and claws. 
- Color the cat to resemble Crenshaw.

Part D: Use the scientific method to see if a magnet functions as a compass. Fill in the missing information.

In which direction does a compass point? _____

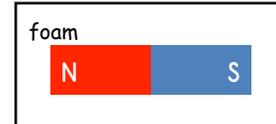
- Step One: Ask a question.

- Step Two: Gather information and form a hypothesis.

- Step Three: Test the hypothesis.

- ♦ Materials:

- Bar magnet
- Piece of foam at least one inch larger than the bar magnet
- Non-metal container of water
- Small compass



- ♦ Experiment variables:

- Independent variable: _____
- Dependent variable: _____
- Control variables: _____

- ♦ Test procedure:

- Tape the bar magnet to the piece of foam.
- Place the foam in the container of water.
- Hold the container of water, and turn in all directions.
- Test your results using a compass.

- ♦ Observations:

- _____
- _____
- _____
- _____

- ♦ Change a control variable. Make observations.

- ♦ Test to see if the shape or size of a magnet affects its ability to function as a compass.
- ♦ Test to see if a temporary magnet functions as a compass.

- _____
- _____
- _____
- _____

- Step Four: Draw a conclusion.

- Step Five: Report the results. Draw a diagram of the placement of the magnet on the water. Draw a diagram of the ending position of the magnet on the water.

name _____



Part A: Keyboarding warm-up

*Prop this worksheet on a stand or clipboard next to your computer. Keep your eyes on the worksheet as you type. If it helps you remember the key locations, say the letters aloud as you type them. Look at the word document on your computer only when you are finished keyboarding.

- Open a new word document, and name it lesson three.
- Set a timer for five minutes and begin typing.
- It is understood that the keyboarder should enter or return at the end of the line in the keyboarding practice exercises. The lines should be typed exactly as they are written on the worksheet.
- If you tap the wrong key and make an error, continue to type. Do not attempt to erase it or correct it.
- If you complete the warm-up exercise before the timer finishes, repeat the exercise and continue to type until the timer is finished.

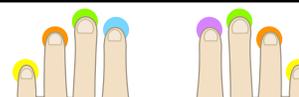
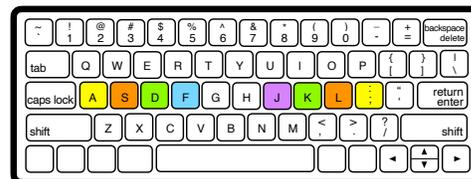
fff jjj ddd kkk ggg hhh eee iii eee kkk ddd jjj fff hhh ggg
 ffjj ddkk gghh eeii ffjj ddkk gghh eeii iiee hhgg kkdd jjff
 kdjjfhggie dkfjhhei kdjgfdiee kddjfheeii kedijghd kkejddggi
 dig hid jig hike feed heed hide jed did died deed fig hiked
 die edge geek kid hi edged died jeff hedge eddie jigg edged

- Save your work.

Part B: New keys

New Keys: L and S

- Tap the L key three times with your right ring finger and then tap the space bar.
- Tap the S key three times with your left ring finger and then tap the space bar.
- Now alternate letters. Tap the L key three times, space, the S key three times, and then space. Continue until two lines are filled.



Practice: L and S

- Type these lines:

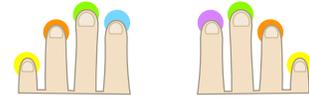
ls ls ls sl sl sl lls lls ssl ssl ls ls ls ls sl sl sl sl sl
 llss llss lssl lssl slls slls llssll llssll llssll sslls ssllss ssllss
 lskdjf lskdjf sldkfj sldkfj slkdfj slkdfj sglh sglh sflj ljfs
 gksllskd skdllskd lldkssdgh lldkssdgh sslldkghs sslldkghs
 flsdkgh flsdkgh flsdkgh ldkghsl ldkghsl ldkghsl
 lid dig fig fed gel hid kid she he sell fish said hide shed dish
 gill jigs jill hid gills eggs kids leigh life hides leeks likes lied
 ledges slid life did figs seeds shells hedges kids jigg ed less

- Always return your finger to its home key after it has moved to tap another key.
- Save your work

Part C: New keys

New Keys: semi-colon and A

- Tap the semi-colon key three times with your right pinkie finger and then tap the space bar.
- Tap the A key three times with your left pinkie finger and then tap the space bar.
- Now alternate letters. Tap the semi-colon key three times, space, the A key three times, and then space. Continue until two lines are filled.



Practice: semi-colon and A

- Type these lines:

;a ;a ;a ;;aa ;;aa aa;; aa;; a;a; ;a;a ;;;aaa ;;;aaa aaa;;; aaa;;;

jj;; ffaa ll;; ssaa kk;; ddaa gg;; hhaa gha; h;ga j;af sal;

age; if; all; lad; ads; fad; his; ada; glee; had; add; dad;

lass; said added; aids aided; asked addled; ali all; flea

alda alleges that hal aided all his allies; sal asked if a lad had

ideas; les said dad had disliked glasses; kid added all his leads;

- Always return your finger to its home key after it has moved to tap another key.
- Save your work.

Part D: Review practice. Focus on accuracy.

- Type these lines:

lid lid; jig jig; sag sag; jag jag; leg leg; gas gas; ill ill; see see;

aid aid; dad dad; age age; had had; sea sea; add add; fad fad;

eel eel; has has; sea sea; sad sad; sis sis; dig dig; aide aide;

deal deal; safe safe; gash gash; heal heal; fade fade; gall gall;

jeff had a salad; sis hiked hills; dad hides his shades; he held his

head high; sasha sees shellfish as she fishes; al heeds his less

selfish ideas; she is glad; dee is glad; iggi egged a lad; he likes

desks; he shall flash a shield; a lead glass is safe; kid dislikes les

- Save your work.

Part E: Complete each practice exercise on worksheet 81a again. Find a balance between accuracy and speed. Time yourself.

- Check your work.
- Use the chart on worksheet 73a. Record the number of correct "words", total "words", and completion time from each practice exercise.
- Write a fraction representing the ratio of the number of correct words to the total number of words.
- Calculate the percentage of words correct.
- How do your daily statistics compare to the previous day?

name _____



Part A: To find the reciprocal of a fraction, exchange the numerator and the denominator.

<u>Number</u>	Hint: flip the fraction.	<u>Reciprocal</u>
$\frac{4}{5}$		$\frac{5}{4}$

A number and its reciprocal have a product of one. $\frac{4}{5} \cdot \frac{5}{4} = 1$

- Write the reciprocal of each number. Then multiply the numbers to verify that the product is equal to one. Remember that an integer can be written as a fraction with a denominator of 1.

Number	Reciprocal	Product
$\frac{4}{5}$		
$\frac{2}{9}$		
$\frac{8}{11}$		
$\frac{1}{7}$		
$\frac{6}{13}$		

Multiplication and division are inverse operations. They undo each other.

$$\frac{2}{9} \cdot \frac{1}{7} = \frac{2}{63} \longrightarrow \frac{2}{63} \div \frac{1}{7} = \frac{2}{9}$$

Multiplying by the reciprocal gives the same result as dividing.

$$\frac{2}{63} \div \frac{1}{7} = \frac{2}{9} \qquad \frac{2}{63} \cdot \frac{7}{1} = \frac{2 \cdot 7}{63 \cdot 1} = \frac{14}{63} \xrightarrow{\text{Reduce to lowest terms.}} \frac{2}{9}$$

* Remember the fun trick to reduce fractions:

- Write the numerator and denominator as a product of prime factors.

$$\frac{14}{63} = \frac{2 \cdot 7}{3 \cdot 3 \cdot 7} = \frac{2}{9}$$

- Or if you can "see" the common factor, cancel it out during the multiplication process.

$$\frac{2 \cdot \cancel{7}}{\cancel{63} \cdot 1} = \frac{2}{9}$$

Part B: Divide the fractions. Reduce the product to lowest terms when needed.

1) $\frac{2}{3} \div \frac{5}{9} =$

2) $\frac{7}{8} \div \frac{3}{10} =$

3) $\frac{5}{12} \div \frac{5}{6} =$

4) $\frac{3}{11} \div \frac{4}{7} =$

5) $\frac{3}{16} \div \frac{3}{4} =$

6) $\frac{2}{5} \div \frac{5}{16} =$

Part C: Convert each fraction to a decimal number. Then write it as a percent.

1) $\frac{4}{8}$

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

3) $\frac{5}{12}$

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

5) $\frac{7}{10}$

6) $\frac{9}{12}$

Part D: Use the order of operations to simplify each expression. Work from left to right.

- What is the order of operations in math?

1) $11 + 6 \cdot 2 - 9 \div 3$

2) $12 + 8 \cdot 6 - 15 \div 5$

3) $65 - 4 \cdot 12 + 27 \div 3$

4) $13 \cdot 11 + 17 - 288 \div 9$

5) $225 \div 5 - 4 + 14 \cdot 8$

6) $4,301 - 23 \cdot 2 + 7 \cdot 8$

7) $24 - (7 - 5) \cdot 6 \div 2$

8) $56 \div 4(8 - 6) + 4$

9) $\frac{11}{18} - \frac{2}{3} \cdot \frac{1}{5} \div \frac{4}{5} - \frac{1}{3}$

10) $842.702 + 8.6 \cdot 3.4 - 15.3 \div 3$