

Math 6 and
Math 6/7

Summer
Workbook

Instructions

- 1) Print out the packet and answers.
- 2) Do about one-half of a page per day throughout the summer.
- 3) Check your answers after you do each page.
- 4) Make sure to show all work on the packet or put work in a notebook or on several pieces of paper that will be turned in with the packet in August.
- 5) You may NOT use a CALCULATOR on the packet.
- 6) Bring the finished packet with you to school on the first or second day of school. Please give it to your math teacher. You will receive credit worth five homework assignments for your first grade in math.
- 7) Remember we offer help at 11:00 at the following places throughout the summer:

Tuesdays at Mir Park

Wednesdays at West (Commons)

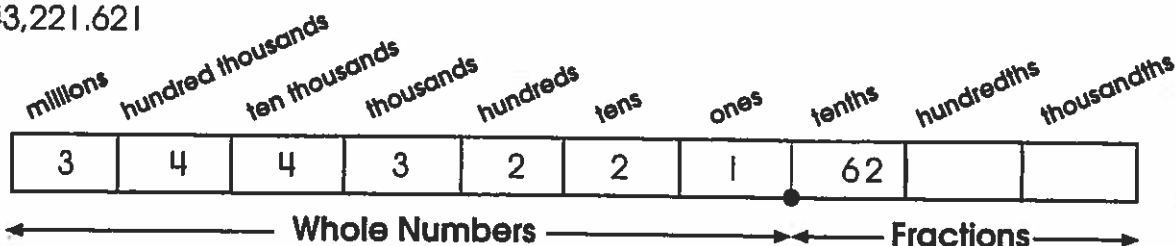
Thursdays at Infinity Park

Place Value

Place value is the position of a digit in a number. A digit's place in a number shows its value. Numbers left of the decimal point represent **whole numbers**. Numbers right of the decimal point represent a part, or **fraction**, of a whole number. These parts are broken down into tenths, hundredths, thousandths, and so on.

Example:

3,443,221.621



Directions: Write the following number words as numbers.

1. Three million, forty-four thousand, six hundred twenty-one _____
2. One million, seventy-seven _____
3. Nine million, six hundred thousand, one hundred two _____
4. Twenty-nine million, one hundred three thousand and nine tenths

5. One million, one hundred thousand, one hundred seventy-one and thirteen hundredths _____

Directions: In each box, write the corresponding number for each place value.

- | | | |
|----------------------|--------------------------|-------------------|
| 1. 4,822,000.00 | <input type="checkbox"/> | hundreds |
| 2. 55,907,003.00 | <input type="checkbox"/> | thousands |
| 3. 190,641,225.07 | <input type="checkbox"/> | hundred thousands |
| 4. 247,308,211.59 | <input type="checkbox"/> | tenths |
| 5. 7,594,097.33 | <input type="checkbox"/> | millions |
| 6. 201,480,110.01 | <input type="checkbox"/> | hundred thousands |
| 7. 42,367,109,074.25 | <input type="checkbox"/> | hundredths |



Lesson 1.5 Addition and Subtraction Practice

Add or subtract.

- | | a | b | c | d |
|----|--|---|---|--|
| 1. | $\begin{array}{r} 237 \\ + 846 \\ \hline \end{array}$ | $\begin{array}{r} 2149 \\ + 3765 \\ \hline \end{array}$ | $\begin{array}{r} 486 \\ + 3117 \\ \hline \end{array}$ | $\begin{array}{r} 19217 \\ + 33121 \\ \hline \end{array}$ |
| 2. | $\begin{array}{r} 738 \\ - 244 \\ \hline \end{array}$ | $\begin{array}{r} 657 \\ - 582 \\ \hline \end{array}$ | $\begin{array}{r} 212 \\ - 104 \\ \hline \end{array}$ | $\begin{array}{r} 968 \\ - 324 \\ \hline \end{array}$ |
| 3. | $\begin{array}{r} 783 \\ 214 \\ + 553 \\ \hline \end{array}$ | $\begin{array}{r} 7163 \\ 1172 \\ + 2235 \\ \hline \end{array}$ | $\begin{array}{r} 10682 \\ 21315 \\ + 32168 \\ \hline \end{array}$ | $\begin{array}{r} 76188 \\ 2133 \\ + 868 \\ \hline \end{array}$ |
| 4. | $\begin{array}{r} 7138 \\ - 2453 \\ \hline \end{array}$ | $\begin{array}{r} 4648 \\ - 3725 \\ \hline \end{array}$ | $\begin{array}{r} 6733 \\ - 3904 \\ \hline \end{array}$ | $\begin{array}{r} 7633 \\ - 2018 \\ \hline \end{array}$ |
| 5. | $\begin{array}{r} 824 \\ 319 \\ 277 \\ + 162 \\ \hline \end{array}$ | $\begin{array}{r} 1753 \\ 2164 \\ 4418 \\ + 2903 \\ \hline \end{array}$ | $\begin{array}{r} 21391 \\ 14211 \\ 30402 \\ + 11308 \\ \hline \end{array}$ | $\begin{array}{r} 16127 \\ 4233 \\ 1050 \\ + 212 \\ \hline \end{array}$ |
| 6. | $\begin{array}{r} 21689 \\ - 13211 \\ \hline \end{array}$ | $\begin{array}{r} 54923 \\ - 27888 \\ \hline \end{array}$ | $\begin{array}{r} 18254 \\ - 9231 \\ \hline \end{array}$ | $\begin{array}{r} 48631 \\ - 24520 \\ \hline \end{array}$ |
| 7. | $\begin{array}{r} 686492 \\ - 48304 \\ \hline \end{array}$ | $\begin{array}{r} 272189 \\ - 217324 \\ \hline \end{array}$ | $\begin{array}{r} 444662 \\ - 86056 \\ \hline \end{array}$ | $\begin{array}{r} 588212 \\ - 31573 \\ \hline \end{array}$ |
| 8. | $\begin{array}{r} 271 \\ 733 \\ 108 \\ 213 \\ + 117 \\ \hline \end{array}$ | $\begin{array}{r} 270 \\ 1200 \\ 123 \\ + 204 \\ \hline \end{array}$ | $\begin{array}{r} 1385 \\ 2117 \\ 1208 \\ + 124 \\ \hline \end{array}$ | $\begin{array}{r} 275 \\ 106 \\ 110 \\ 215 \\ + 550 \\ \hline \end{array}$ |

SKILL NUMBER 8: Subtracting One Whole Number From Another Where Multiple Transfers Are Required

EXAMPLE:

$$\begin{array}{r} 20571 \\ - 4637 \\ \hline \end{array}$$

SAMPLE SOLUTION:

$$\begin{array}{r} ^9 \\ 1 \cancel{0} 15 \cancel{6} \cancel{1} \\ \cancel{2} \cancel{0} \cancel{5} \cancel{7} \cancel{1} \\ - 4637 \\ \hline 15934 \end{array}$$

This example is similar to the one in Skill Number 7 except that it requires more transfers.

PROBLEMS:

(1) $\begin{array}{r} 832 \\ - 56 \\ \hline \end{array}$

(2) $\begin{array}{r} 754 \\ - 78 \\ \hline \end{array}$

(3) $\begin{array}{r} 612 \\ - 64 \\ \hline \end{array}$

(4) $\begin{array}{r} 936 \\ - 78 \\ \hline \end{array}$

(5) $\begin{array}{r} 2,654 \\ - 708 \\ \hline \end{array}$

(6) $\begin{array}{r} 3,567 \\ - 489 \\ \hline \end{array}$

(7) $\begin{array}{r} 5,431 \\ - 656 \\ \hline \end{array}$

(8) $\begin{array}{r} 9,625 \\ - 467 \\ \hline \end{array}$

(9) $\begin{array}{r} 8,354 \\ - 5,079 \\ \hline \end{array}$

(10) $\begin{array}{r} 6,147 \\ - 3,708 \\ \hline \end{array}$

(11) $\begin{array}{r} 4,076 \\ - 1,327 \\ \hline \end{array}$

(12) $\begin{array}{r} 8,354 \\ - 3,506 \\ \hline \end{array}$

(13) $\begin{array}{r} 10,481 \\ - 3,524 \\ \hline \end{array}$

(14) $\begin{array}{r} 34,025 \\ - 8,260 \\ \hline \end{array}$

(15) $\begin{array}{r} 20,073 \\ - 6,447 \\ \hline \end{array}$

(16) $\begin{array}{r} 37,516 \\ - 6,627 \\ \hline \end{array}$

(17) $\begin{array}{r} 40,502 \\ - 13,204 \\ \hline \end{array}$

(18) $\begin{array}{r} 54,338 \\ - 40,079 \\ \hline \end{array}$

(19) $\begin{array}{r} 84,000 \\ - 52,076 \\ \hline \end{array}$

(20) $\begin{array}{r} 70,600 \\ - 42,156 \\ \hline \end{array}$



Subtraction Word Problems

Directions: Solve the following subtraction word problems.

1. Last year, 28,945 people lived in Mike's town. This year there are 31,889. How many people have moved in?

2. Brad earned \$227 mowing lawns. He spent \$168 on tapes by his favorite rock group. How much money does he have left?

3. The school year has 180 days. Carrie has gone to 32 school days so far. How many more days does she have left?

4. Craig wants a skateboard that costs \$128. He has saved \$47. How much more does he need?

5. To get to school, Jennifer walks 1,275 steps and Carolyn walks 2,618 steps. How many more steps does Carolyn walk than Jennifer?

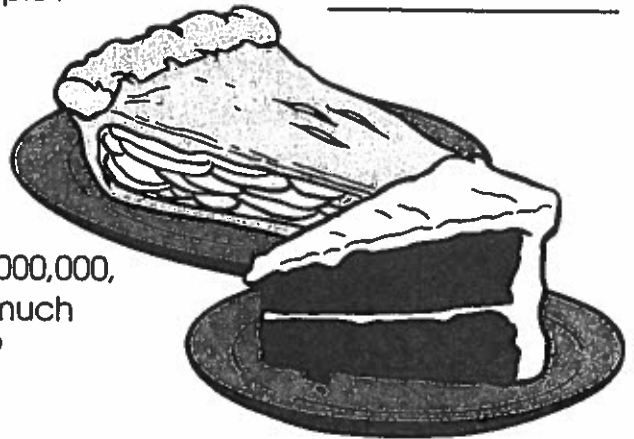
6. Amy has placed 91 of the 389 pieces in a new puzzle she purchased. How many more does she have left to finish?

7. From New York, it's 2,823 miles to Los Angeles and 1,327 miles to Miami. How much farther away is Los Angeles?

8. Sheila read that a piece of carrot cake has 236 calories, but a piece of apple pie has 427 calories. How many calories will she save by eating the cake instead of the pie?

9. Tim's summer camp costs \$223, while Sam's costs \$149. How much more does Tim's camp cost?

10. Last year, the nation's budget was \$45,000,000,000, but the nation spent \$52,569,342,000. How much more than its budget did the nation spend?



One-Digit Multiplication



Here's how to do 1-digit multiplication without regrouping.

Multiply the ones.

$$\begin{array}{r} 2,043 \\ \times \quad 2 \\ \hline 6 \end{array}$$

Multiply the tens.

$$\begin{array}{r} 2,043 \\ \times \quad 2 \\ \hline 86 \end{array}$$

Multiply the hundreds and thousands.

$$\begin{array}{r} 2,043 \\ \times \quad 2 \\ \hline 4,086 \end{array}$$

Directions: Multiply.

$$\begin{array}{r} 1) \quad 41 \\ \times \quad 2 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \\ \times \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 103 \\ \times \quad 2 \\ \hline \end{array}$$

$$\begin{array}{r} 122 \\ \times \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 101 \\ \times \quad 8 \\ \hline \end{array}$$

$$\begin{array}{r} 1,214 \\ \times \quad 2 \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 230 \\ \times \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 3,422 \\ \times \quad 2 \\ \hline \end{array}$$

$$\begin{array}{r} 689 \\ \times \quad 0 \\ \hline \end{array}$$

$$\begin{array}{r} 3,321 \\ \times \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 9,738 \\ \times \quad 1 \\ \hline \end{array}$$

$$\begin{array}{r} 1,011 \\ \times \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 32 \\ \times \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 1,022 \\ \times \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 5,903 \\ \times \quad 1 \\ \hline \end{array}$$

$$\begin{array}{r} 4,413 \\ \times \quad 2 \\ \hline \end{array}$$

$$\begin{array}{r} 204 \\ \times \quad 2 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ \times \quad 2 \\ \hline \end{array}$$

Directions: Write a numeral in each box to make the multiplication problem true.

$$\begin{array}{r} 4) \quad \square \square \\ \times \quad \square 3 \\ \hline 6 \quad 3 \end{array}$$

$$\begin{array}{r} \square \square \square \\ \times \quad \square \square \square \\ \hline 2 \quad 5 \quad 6 \end{array}$$

$$\begin{array}{r} 1 \quad 0 \quad 2 \\ \times \quad \square \\ \hline 2 \quad 0 \quad 4 \end{array}$$

$$\begin{array}{r} 2, \quad 3 \quad 1 \quad 1 \\ \times \quad \square \square \square \square 3 \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad 2 \square \square 1 \\ \times \quad \square \square \\ \hline 4 \quad 8 \quad 2 \end{array}$$

$$\begin{array}{r} \square 0 3 \\ \times \quad \square \square \\ \hline 9 \quad 0 \quad 9 \end{array}$$

$$\begin{array}{r} 2, \square 3 \square \\ \times \quad \square \square \\ \hline \square, \quad 2 \quad 6 \quad 8 \end{array}$$

$$\begin{array}{r} 8, \square 6 3 \\ \times \quad \square, \quad 0 \square 3 \\ \hline \end{array}$$

SKILL NUMBER 10: Multiplying A Whole Number By A Two Or Three Digit Multiplier

EXAMPLE:

$$\begin{array}{r} 435 \\ \times 26 \\ \hline \end{array}$$

SAMPLE SOLUTION:

$$\begin{array}{r} \begin{array}{l} \text{Hundreds} \\ \text{Tens} \\ \text{Ones} \end{array} \\ \begin{array}{r} 435 \\ \times 26 \\ \hline 2610 \\ 870 \\ \hline 11,310 \end{array} \end{array}$$

Step 1: Multiply 6 x 435. Your answer should end under the 6 which is in the ones' column.

Step 2: Multiply 2 x 435.
2 x 435 = 870
The last number in 870 should be in the tens' column under the 2 that you multiplied by.

Step 3: Add the figures obtained in steps 1 and 2.

PROBLEMS:

(1) $\begin{array}{r} 628 \\ \times 35 \\ \hline \end{array}$

(2) $\begin{array}{r} 7694 \\ \times 398 \\ \hline \end{array}$

(3) $\begin{array}{r} 4635 \\ \times 418 \\ \hline \end{array}$

(4) $\begin{array}{r} 2681 \\ \times 34 \\ \hline \end{array}$

(5) $\begin{array}{r} 9876 \\ \times 384 \\ \hline \end{array}$

(6) $\begin{array}{r} 4796 \\ \times 638 \\ \hline \end{array}$

(7) $\begin{array}{r} 8764 \\ \times 895 \\ \hline \end{array}$

(8) $\begin{array}{r} 6247 \\ \times 658 \\ \hline \end{array}$

(9) $\begin{array}{r} 7483 \\ \times 246 \\ \hline \end{array}$

(10) $\begin{array}{r} 384 \\ \times 76 \\ \hline \end{array}$

(11) $\begin{array}{r} 2,563 \\ \times 302 \\ \hline \end{array}$

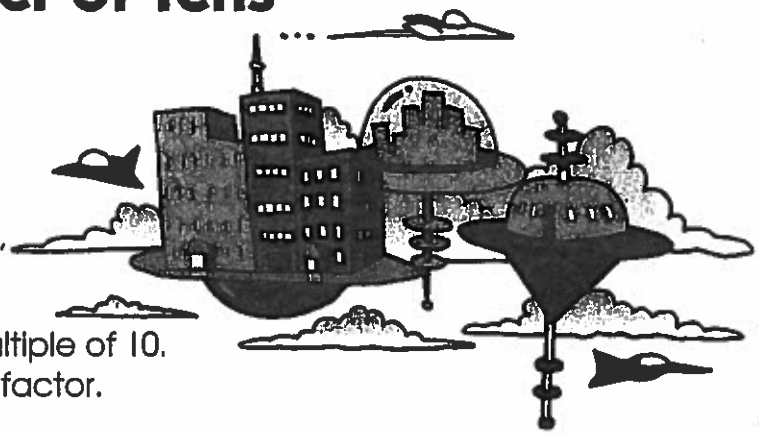
(12) $\begin{array}{r} 7,604 \\ \times 906 \\ \hline \end{array}$

(13) $\begin{array}{r} 6,574 \\ \times 300 \\ \hline \end{array}$

(14) $\begin{array}{r} 4,672 \\ \times 306 \\ \hline \end{array}$

(15) $\begin{array}{r} 5,096 \\ \times 220 \\ \hline \end{array}$

Tower of Tens



Example:

It is easy to multiply numbers by multiples of 10, such as 10, 100, 1,000, 10,000, and so on. Here's how:

Count the number of zeros in the multiple of 10. Attach that many zeros to the other factor.

$$3 \times 10 = 30$$

$$3 \times 100 = 300$$

$$3 \times 1,000 = 3,000$$

$$3 \times 10,000 = 30,000$$

$$3 \times 100,000 = 300,000$$

$$3 \times 1,000,000 = 3,000,000$$

$$3 \times 10,000,000 = 30,000,000$$

$$20 \times 10 = 200$$

$$20 \times 100 = 2,000$$

$$20 \times 1,000 = 20,000$$

$$20 \times 10,000 = 200,000$$

$$20 \times 100,000 = 2,000,000$$

$$20 \times 1,000,000 = 20,000,000$$

$$20 \times 10,000,000 = 200,000,000$$

Directions: Find each missing number.

1) $9 \times 10 = \underline{\hspace{2cm}}$

2) $9 \times 100 = \underline{\hspace{2cm}}$

3) $9 \times \underline{\hspace{2cm}} = 9,000$

4) $\underline{\hspace{2cm}} \times 10,000 = 90,000$

5) $9 \times 100,000 = \underline{\hspace{2cm}}$

6) $9 \times \underline{\hspace{2cm}} = 9,000,000$

7) $9 \times 10,000,000 = \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}} \times 10 = 400$

$40 \times \underline{\hspace{2cm}} = 4,000$

$40 \times 1,000 = \underline{\hspace{2cm}}$

$40 \times \underline{\hspace{2cm}} = 400,000$

$40 \times 100,000 = \underline{\hspace{2cm}}$

$40 \times 1,000,000 = \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}} \times 10,000,000 = 400,000,000$

8) $\underline{\hspace{2cm}} \times 10 = 150$

$\underline{\hspace{2cm}} \times 10 = 6,000$

9) $15 \times 100 = \underline{\hspace{2cm}}$

10) $15 \times \underline{\hspace{2cm}} = 15,000$

11) $15 \times \underline{\hspace{2cm}} = 150,000$

12) $15 \times 100,000 = \underline{\hspace{2cm}}$

13) $15 \times 1,000,000 = \underline{\hspace{2cm}}$

14) $15 \times \underline{\hspace{2cm}} = 150,000,000$

$600 \times \underline{\hspace{2cm}} = 60,000$

$600 \times 1,000 = \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}} \times 10,000 = 6,000,000$

$600 \times 100,000 = \underline{\hspace{2cm}}$

$600 \times \underline{\hspace{2cm}} = 600,000,000$

$600 \times 10,000,000 = \underline{\hspace{2cm}}$

Division

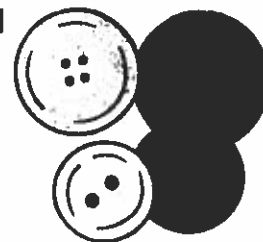
In a division problem, the **dividend** is the number to be divided, the **divisor** is the number used to divide, and the **quotient** is the answer. To check your work, multiply your answer times the divisor and you should get the dividend.

Example:

$$\begin{array}{r} 130 \leftarrow \text{quotient} \\ \text{divisor} \rightarrow 4 \overline{)520} \leftarrow \text{dividend} \\ \underline{4} \\ 12 \\ \underline{12} \\ 00 \end{array}$$

Check:

$$\begin{array}{r} 130 \leftarrow \text{quotient} \\ \times 4 \leftarrow \text{divisor} \\ \hline 520 \leftarrow \text{dividend} \end{array}$$



Directions: Solve the following division problems.

1. $3 \overline{)546}$

2. $5 \overline{)720}$

3. $2 \overline{)458}$

4. $4 \overline{)796}$

5. $7 \overline{)896}$

6. $4 \overline{)128}$

7. $4 \overline{)376}$

8. $5 \overline{)225}$

9. $3 \overline{)684}$

10. $6 \overline{)924}$

11. $25 \overline{)475}$

12. $16 \overline{)768}$

13. $14 \overline{)840}$

14. $22 \overline{)418}$

15. $21 \overline{)693}$

Directions: Solve these division problems in your head. Challenge yourself for speed and accuracy.

1. $22 \div 2 =$ _____

2. $15 \div 3 =$ _____

3. $72 \div 9 =$ _____

4. $36 \div 4 =$ _____

5. $27 \div 9 =$ _____

6. $56 \div 8 =$ _____

7. $81 \div 9 =$ _____

8. $42 \div 6 =$ _____

9. $63 \div 9 =$ _____

10. $60 \div 5 =$ _____

11. $70 \div 10 =$ _____

12. $98 \div 7 =$ _____

13. $55 \div 5 =$ _____

14. $64 \div 8 =$ _____

15. $84 \div 3 =$ _____



Zeros in the Quotient

Some problems will have a zero in the quotient.

$$\begin{array}{r}
 1,026R2 \\
 5 \overline{) 5,132} \\
 \underline{-5} \\
 01 \\
 \underline{-00} \\
 13 \\
 \underline{-10} \\
 32 \\
 \underline{-30} \\
 2
 \end{array}$$

5 does not divide into 1. Put a zero in the quotient as a placeholder.



Directions: Divide

①

$$4 \overline{) 1,636}$$

②

$$7 \overline{) 1,680}$$

③

$$6 \overline{) 1,818}$$

④

$$5 \overline{) 5,285}$$

⑤

$$5 \overline{) 5,025}$$

⑥

$$9 \overline{) 21,654}$$

⑦

$$8 \overline{) 8,320}$$

⑧

$$6 \overline{) 24,300}$$

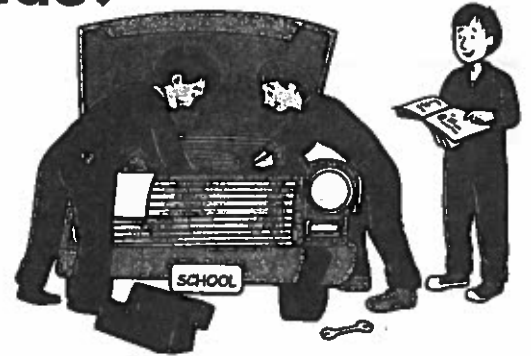


Multiply or Divide?

These key words will help you know when to multiply and when to divide.

Multiplication key words: **in all**, **altogether**, **times**, and **each**

Division key words: **per** and **each**



Directions: Circle the key words and solve the story problems.

1. There are 9 classrooms at the vocational school. The average number of students per classroom is 27 students. How many students altogether are there in the school?

2. Thirty-five students are studying auto mechanics. Three times that many are studying business. How many students are studying business?

3. The semester is 16 weeks long. Students attend class 5 days a week. How many days in all must a student attend class each semester?

4. In one class of 27 students, each student used \$30.00 worth of materials. Altogether, how much did materials cost this class?

5. Lunch cost each student \$11.50 for a 5-day week. How much does each lunch cost?

6. The average student drives a total of 8 miles per day to attend classes. How many miles in all does a student drive during the 80-day semester?



Many Times Over

Directions: Mrs. Ten-twenty's class was studying multiples. Each student wrote a problem for the others to solve. Write the number sentence and answer for each problem.

1. If it takes the average student 10 minutes to finish 20 problems, how long would it take to finish 40?



2. If it takes 20 minutes to write 15 number facts, how long would it take to write 45?

3. The design received 30 points. If the points were tripled, how many points would the design have received?

4. Each flower on the bush had 7 pink petals. If there were 20 flowers on the bush, how many petals would there be altogether?

5. Baby Rita's shoe weighs 2 oz. Debble's shoe weighs 10 times as much. How much does Debble's shoe weigh?

6. Tyrone kept a bug collection in 10 boxes that each held 20 different kinds of bugs. Nikki had 30 boxes of 20 bugs each. How many bugs did they have altogether?



7. Barbara was making glitter stars for her wizard costume. If it took her 36 minutes to make 16 stars, how long would it take her to make 40 more stars?

8. The boy scouts were making model cars. Each model car had 62 parts. If they made 8 model cars, how many total parts would there be?

THE BEST GUESS
(MONEY)

Which answer is best? Circle the answer.

1. $\$15.16 + \4.99

Less than More than
\$20 \$20

7. $12 \times \$4.75$

Less than More than
\$50 \$50

2. $\$16.25 - \6.97

Less than More than
\$10 \$10

8. $\$8.85 \div 9$

Less than More than
\$1.00 \$1.00

3. $8 \times \$10.98$

Less than More than
\$88 \$88

9. $\$1.63 + \$2.75 + \$3.98$

Less than More than
\$8.00 \$8.00

4. $\$3.89 \div 4$

Less than More than
\$1.00 \$1.00

10. $\$17.17 - \10.27

Less than More than
\$7.00 \$7.00

5. $\$2.94 + \3.15

Less than More than
\$6.00 \$6.00

11. $16 \times \$1.51$

Less than More than
\$24 \$24

6. $\$20 - \9.89

Less than More than
\$10 \$10

12. $\$31.17 \div 8$

Less than More than
\$3.50 \$3.50

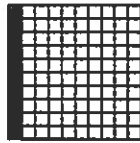


Decimals

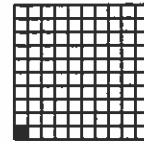
A **decimal** is a number that includes a period called a **decimal point**. The digits to the right of the decimal point are a value less than one.



one whole



one tenth



one hundredth

The place value chart below helps explain decimals.

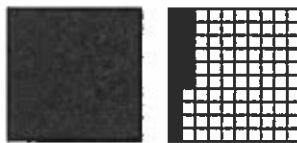
hundreds	tens	ones	tenths	hundredths	thousandths
6	3	2	. 4		
	4	7	. 0	5	
		8	. 0	0	9

A decimal point is read as "and." The first number, 632.4, is read as "six hundred thirty-two and four tenths." The second number, 47.05, is read as "forty-seven and five hundredths." The third number, 8.009, is read as "eight and nine thousandths."

Directions: Write the decimals shown below. Two have been done for you.



1. 1.4



2. _____



3. _____

4. six and five tenths 6.5
5. twenty-two and nine tenths _____
6. thirty-six and fourteen hundredths _____
7. forty-seven hundredths _____
8. one hundred six and four tenths _____
9. seven and three hundredths _____
10. one tenth less than 0.6 _____
11. one hundredth less than 0.34 _____
12. one tenth more than 0.2 _____

Comparing and Ordering Decimals

Which is greater, 25.692 or 25.6902?

Line up the decimal points.

Start at the left. Find the

first place in which the
digits are different.

Compare the digits.

The decimal with the
greater digit is greater.

25.692
25.6902

2 is greater than 0.
 $2 > 0$

$25.692 > 25.6902$

Order decimals by comparing them two at a time.

State the greater number in each group.

1. 0.042 or 0.422

2. 7.398 or 7.378

3. 76.1423 or 76.142

4. 1.53 or 1.0053

5. 14.358 or 14.374

6. 0.092 or 0.192

7. 709.12 or 790.21

8. 5.0045 or 5.0405

9. 12.2 or 2.222

Order each set of decimals from least to greatest.

10. 6.583
6.843
6.065
6.269

11. 456.73
465.32
456.37
456.23

12. 0.004
0.04
0.035
0.305

Order each set of decimals from greatest to least.

13. 1.16
0.616
1.066
0.06
0.016

14. 91.5
95.155
9.05
19.005
95.51

15. 745.0003
745.303
745.03
745.333
745.003



Rounding

Directions: Round off each number, then estimate the answer. You can use a calculator to find the exact answer.



Round to the nearest ten.

Estimate

Actual Answer

1. $86 \div 9 =$

2. $237 + 488 =$

3. $49 \times 11 =$

4. $309 + 412 =$

5. $625 - 218 =$



Round to the nearest hundred.

6. $790 - 70 =$

7. $690 \div 70 =$

8. $2,177 - 955 =$

9. $4,792 + 3,305 =$

10. $5,210 \times 90 =$

Round to the nearest thousand.

11. $4,078 + 2,093 =$

12. $5,525 - 3,065 =$

13. $6,047 \div 2,991 =$

14. $1,913 \times 4,216 =$

15. $7,227 + 8,449 =$



Rounding Decimals

Round 24.625 to the nearest tenth.

You can use a number line.



Find the approximate location of 24.625 on the number line.

24.625 is closer to 24.6 than to 24.7.
24.625 rounded to the nearest tenth is 24.6.

You can also round without a number line.

Find the place to which you want to round.

Look at the digit to the right.
If the digit is less than 5, round down.
If the digit is 5 or greater, round up.

2 is less than 5.
Do not change the digit.

24.625

24.625

24.6

Round each number to the underlined place-value position.

1. 46.124

2. 29.915

3. 15.1733

4. 0.159

5. 308.862

6. 0.0561

7. 0.577

8. 0.0089

9. 2.62

10. 76.0552

11. 12.1903

12. 0.855

13. 331.98

14. 0.0549

15. 6.03

16. 173.99

17. 84.012

18. 0.846

19. 12.7642

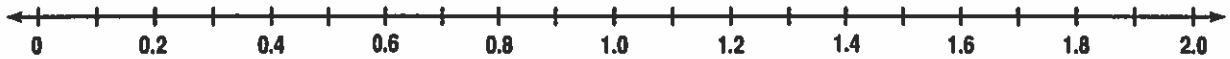
20. 0.062

Record-Breaking Rides

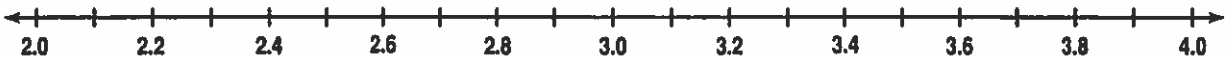
Round each decimal to the nearest tenth. Then use the letter to show its location on the number lines below.

Letter	Decimal	Letter	Decimal	Letter	Decimal	Letter	Decimal
A	0.41	G	0.738	M	0.067	S	7.72
A	3.316	H	6.252	N	2.909	T	4.11
A	7.28	H	4.236	N	0.98	T	7.78
B	6.71	I	4.99	O	2.475	T	3.86
E	4.377	L	3.752	O	2.68	T	6.181
E	6.93	L	1.82	P	5.06	U	1.23
E	5.43	M	1.365	R	5.707	U	3.639
E	6.646	M	2.103	S	3.08	V	4.667
						X	1.608

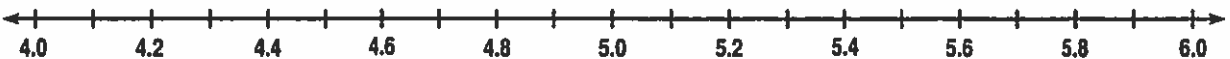
Located in Cedar Point Park, Sandusky, Ohio, this roller coaster has the highest vertical drop.



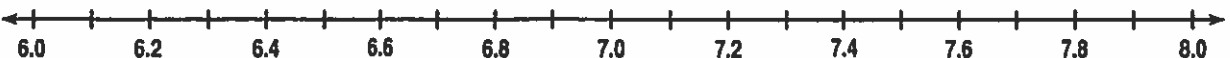
This Japanese roller coaster is one of the tallest in the world. It is 246 feet tall.



This large, looping roller coaster is found at Six Flags Magic Mountain in Valencia, California.

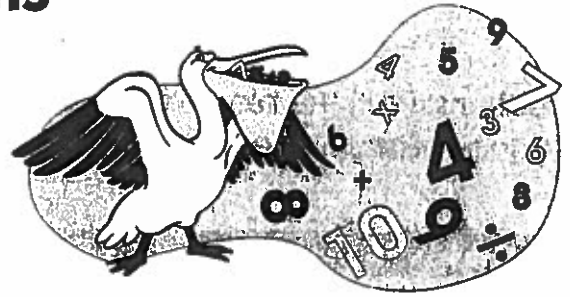


With a run of 1.4 miles, this roller coaster at Kings Island near Cincinnati, Ohio, may be the longest in the world.



Equations

Directions: Solve the equations on another sheet of paper. Write your answers here.



1. $5 + 6 - 4 =$

2. $(3 \times 4) \div 3 =$

3. $(32 \div 8) + 3 =$

4. $(40 \div 8) - 2 =$

5. $6 + (8 \times 3) =$

6. $14 + 12 - 6 =$

7. $(2 \times 9) + 4 =$

8. $(8 \times 8) + 6 =$

9. $6 + (6 \div 6) =$

10. $45 \div (5 \times 3) =$

11. $9 + 7 - 10 =$

12. $(15 \times 2) \div 3 =$

13. $(3 \times 7) - 1 =$

14. $(18 \div 9) \times 8 =$

15. $(36 \div 9) + 8 =$

16. $(21 \div 7) + 6 =$

17. $7 + 8 - 8 =$

18. $9 + 6 - 12 =$

19. $12 + 7 - 8 =$

20. $(56 \div 8) + 4 =$

21. $(64 \div 8) + 5 =$

22. $14 + (2 \times 8) =$

23. $(7 + 9) \div 2 =$

24. $(15 \div 3) \times 2 =$

25. $(5 + 3) \times 3 =$

26. $15 - 7 + 3 =$

27. $(3 + 7) \times (10 \div 2) =$

28. $6 + (8 \div 2) =$

29. $3 \times (5 + 6) =$

30. $15 + (3 \times 2) =$

31. $14 - (8 - 2) - 1 =$

32. $16 - (10 - 4) =$

33. $(14 + 6) \div 5 =$

34. $(3 + 2) \times (4 + 6) =$

35. $12 \times (3 + 2) =$

36. $6 \times (4 + 5) =$

37. $3 + 6 \times 2 + 5 =$

38. $8 + (4 \times 5) =$

39. $(6 \times 8) + 2 =$

40. $30 + (16 \times 2) =$

41. $3 \times (9 + 2) =$

42. $52 - (5 + 3) =$

43. $(64 \div 8) \times 3 =$

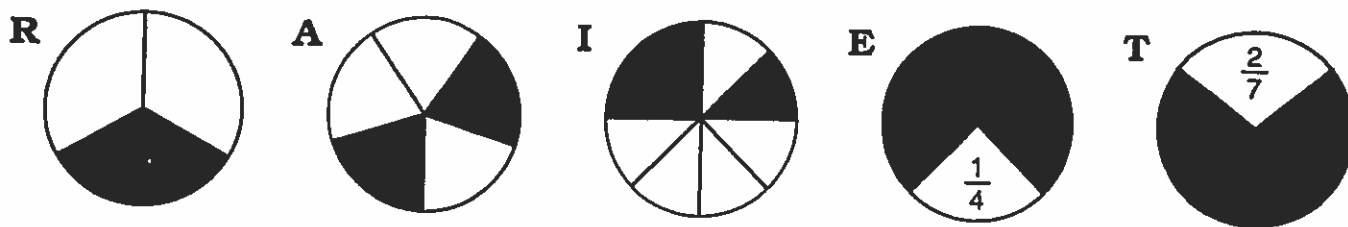
44. $25 - (3 + 8) =$

45. $21 \div (3 + 4) =$

Why Do Teenagers Get Together at Big Burger Restaurant?

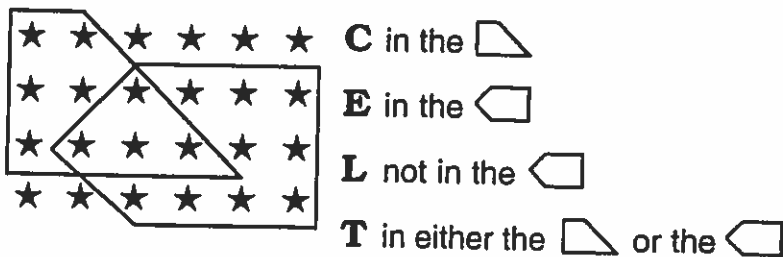
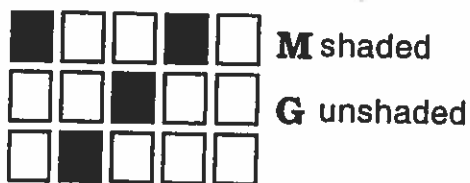
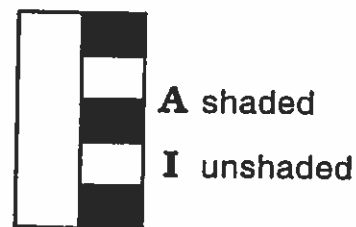
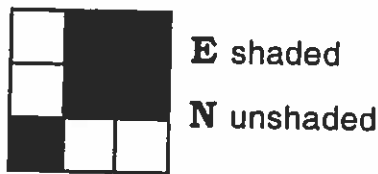
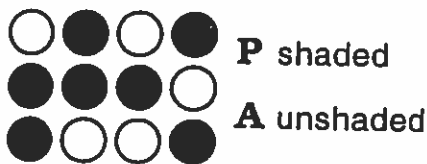
Complete each exercise and find your answer in the set of boxes under the exercise. Write the letter of the exercise in the box containing the answer.

I Write a fraction for the part that is shaded.



$\frac{3}{8}$	$\frac{9}{10}$	$\frac{3}{5}$	$\frac{2}{9}$	$\frac{2}{5}$	$\frac{9}{16}$	$\frac{4}{9}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{13}{16}$	$\frac{3}{4}$	$\frac{5}{8}$	$\frac{5}{7}$

II Write a fraction for the part that is named.



$\frac{4}{15}$	$\frac{13}{24}$	$\frac{5}{12}$	$\frac{18}{24}$	$\frac{7}{10}$	$\frac{4}{9}$	$\frac{11}{15}$	$\frac{7}{24}$	$\frac{7}{12}$	$\frac{11}{24}$	$\frac{3}{10}$	$\frac{9}{24}$	$\frac{5}{9}$

What Kind of Person Falls in Love with Either a Dairy Farmer or a Poet?

Divide each number line as indicated. Label each point. Then write the letter of each exercise above the number line at the corresponding point.

E $\frac{3}{2}$ **O** $\frac{6}{2}$ **W** $\frac{4}{2}$ **O** $\frac{1}{2}$ **H** $2\frac{1}{2}$ **N** $\frac{2}{2}$

halves



T $\frac{4}{3}$ **O** $\frac{8}{3}$ **A** $\frac{2}{3}$ **S** $1\frac{2}{3}$ **N** $\frac{3}{3}$ **T** $\frac{7}{3}$ **W** $\frac{1}{3}$

thirds



Y $\frac{5}{4}$ **R** $\frac{9}{4}$ **A** $\frac{2}{4}$ **O** $\frac{8}{4}$ **R** $\frac{4}{4}$ **F** $1\frac{3}{4}$ **M** $\frac{1}{4}$ **R** $\frac{3}{4}$

fourths



E $\frac{8}{5}$ **R** $\frac{15}{5}$ **T** $\frac{4}{5}$ **O** $2\frac{3}{5}$ **U** $\frac{2}{5}$ **R** $\frac{10}{5}$ **B** $\frac{0}{5}$ **T** $1\frac{1}{5}$

fifths

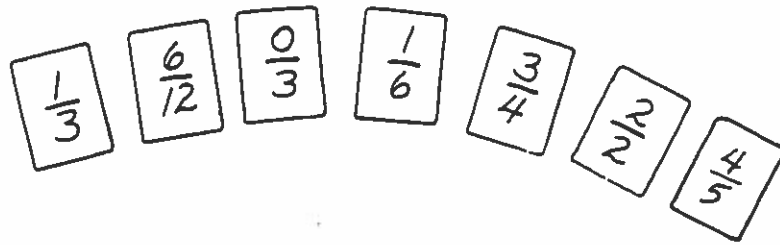
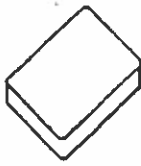


S $\frac{20}{8}$ **R** $\frac{7}{8}$ **E** $\frac{14}{8}$ **O** $\frac{4}{8}$ **E** $2\frac{7}{8}$ **F** $\frac{1}{8}$ **R** $\frac{17}{8}$ **V** $1\frac{3}{8}$

eighths



Suppose the following fraction playing cards were turned face up.



1. Which fraction has a denominator of 6? _____
2. Which fraction has a numerator of 3? _____
3. Which fraction has the smallest denominator? _____
4. Which fraction has a denominator 2 times its numerator? _____
5. Which fraction has a denominator 3 times its numerator? _____
6. Which two fractions have the same denominator? _____, _____
7. Which two fractions have the same numerator? _____, _____
8. Which fraction has its numerator equal to its denominator? _____
9. Which fraction has a denominator that is one more than its numerator? _____
10. Which fraction has the largest denominator? _____
11. Which fraction is equal to 1? _____ (Hint: Which fraction has a whole bar?)
12. Which fraction is equal to 0? _____ (Hint: Which fraction has a zero bar?)

13) A. I'm a fraction playing card. My denominator is 4 times my numerator. Add my numerator and denominator and you get 15. Who am I?



A. _____

14) B. My denominator is 4 more than my numerator. Multiply my numerator by my denominator and you get 12. Who am I?



B. _____

A number which uses both a whole number and a fraction is called a mixed number. Complete the following charts of mixed numbers and their names. (Some have been done for you.)

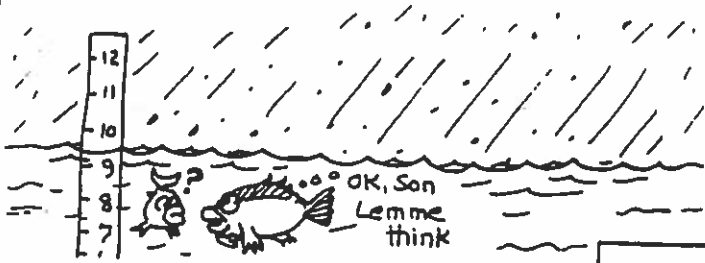
Write the mixed number for each name.

1.	one and four-elevenths
$2\frac{1}{9}$	two and one-ninth
2.	four and seven-eighths
3.	one and three-tenths
$4\frac{2}{5}$	four and two-fifths
4.	two and sixth-elevenths
$3\frac{1}{3}$	three and one-third
5.	four and one-twelfth
$1\frac{3}{7}$	one and three-sevenths
6.	two and three-fourths
7.	five and one-eighth
$6\frac{2}{3}$	six and two-thirds
8.	ten and one-half
9.	three and two-fifths
10.	one and five-sixths

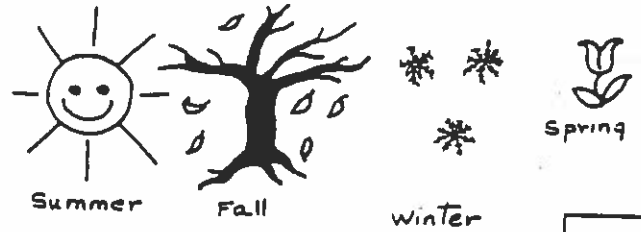
Write the name of each mixed number.

11.	$2\frac{1}{8}$	
12.	$1\frac{5}{6}$	
	$4\frac{1}{3}$	four and one-third
13.	$6\frac{1}{5}$	
	$6\frac{7}{8}$	six and seven-eighths
14.	$1\frac{1}{10}$	
15.	$4\frac{1}{2}$	
	$5\frac{1}{6}$	five and one-sixth
16.	$1\frac{4}{9}$	
	$2\frac{5}{7}$	two and five-sevenths
17.	$3\frac{1}{11}$	
18.	$4\frac{3}{10}$	
19.	$5\frac{1}{4}$	
20.	$3\frac{2}{7}$	
	$7\frac{9}{10}$	seven and nine-tenths

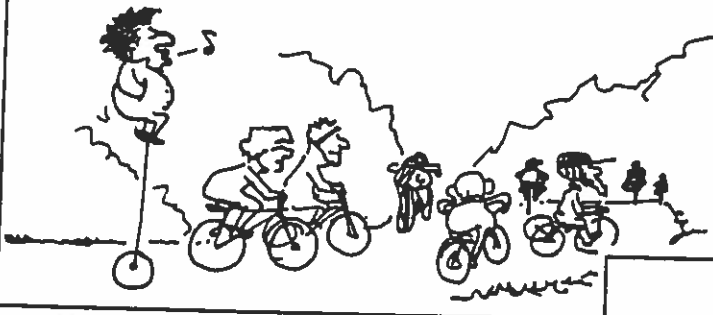
1. The average yearly rainfall in California is 12 inches. If it has already rained 9 inches this year, what fraction of the expected rainfall has come?



2. There are 12 months in a year and 4 different seasons. Each season lasts 3 months. A season is what fraction of a whole year?



3. There are 24 students in Mr. Norris' class, and 11 of them ride bicycles to school. What fraction of the students ride bicycles to school?



4. Did you know that our nickels are made of copper and nickel? 3 parts out of 4 parts are made of copper. What fractional part of a nickel is made of copper?



The surface of the earth is made up of land and water. It could be split into 3 equal parts so that 2 of these parts would be water.



5. What fractional part of the earth's surface is water?

6. What fractional part of the earth's surface is land?

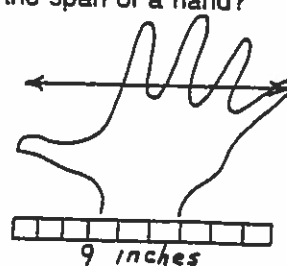
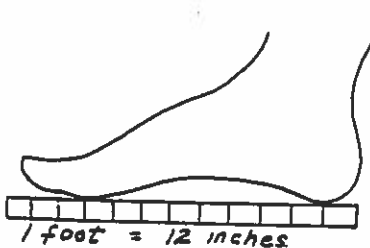
5.

6.

Some of the first measurements were made by using the human hand and foot.

7. The width of a hand was 4 inches. What fractional part of a foot was the width of a hand?

8. The span of a hand was 9 inches. What fractional part of a foot was the span of a hand?



7.

8.

To find a missing numerator in an equation, compare the denominators.

$$\frac{3}{4} = \frac{\quad}{8}$$

Think!

$$? \times 4 = 8$$

Since 8 is equal to 2×4 , the missing numerator is 2×3 .

$$\frac{2 \times 3}{2 \times 4} = \frac{6}{8}$$

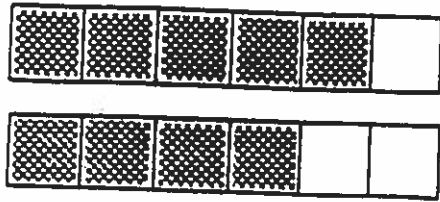
Write the missing numerators.

1. $\frac{1}{2} = \frac{\quad}{12}$	2. $\frac{2}{3} = \frac{\quad}{6}$	3. $\frac{1}{2} = \frac{\quad}{4}$
4. $\frac{2}{3} = \frac{\quad}{9}$	5. $\frac{1}{12} = \frac{\quad}{24}$	6. $\frac{5}{6} = \frac{\quad}{12}$
7. $\frac{0}{3} = \frac{\quad}{12}$	8. $\frac{2}{2} = \frac{\quad}{6}$	9. $\frac{1}{4} = \frac{\quad}{8}$

10. I'm equal to $\frac{1}{3}$ and my denominator is 6. What fraction am I?

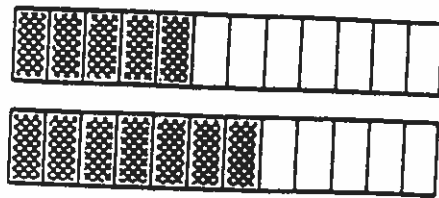
11. My denominator is 16 and I am equal to $\frac{3}{4}$. What fraction am I?

When two fractions have the same denominator, the greater fraction is the one with the greater numerator. The smaller fraction is the one with the smaller numerator.



$$\frac{5}{6} > \frac{4}{6} \text{ since } 5 > 4$$

"is greater than" >



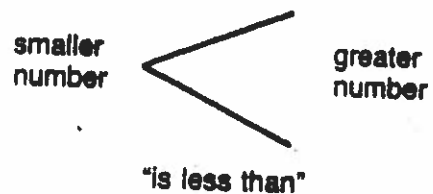
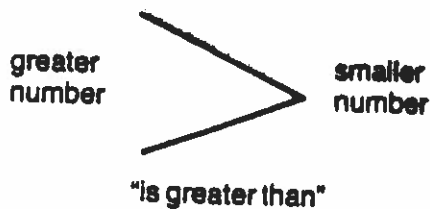
$$\frac{5}{12} < \frac{7}{12} \text{ since } 5 < 7$$

"is less than" <

Write the correct inequality symbol (> or <) between each pair of fractions.

1. $\frac{2}{3} \quad \frac{1}{3}$	2. $\frac{5}{12} \quad \frac{7}{12}$	3. $\frac{1}{4} \quad \frac{2}{4}$
4. $\frac{6}{6} \quad \frac{1}{6}$	5. $\frac{7}{12} \quad \frac{11}{12}$	6. $\frac{6}{6} \quad \frac{5}{6}$
7. $\frac{3}{4} \quad \frac{1}{4}$	8. $\frac{1}{2} \quad \frac{3}{2}$	9. $\frac{3}{6} \quad \frac{2}{6}$

Here's a good way to remember the symbols. The lines point to the smaller number, or the mouth "bites" the bigger number.



It's easy to compare fractions like $\frac{3}{7}$ and $\frac{4}{7}$, but how can you compare fractions like $\frac{3}{5}$ and $\frac{4}{7}$?

Here's a method that will always work. Just replace the fractions with fractions having the same denominator, and then compare the fractions.

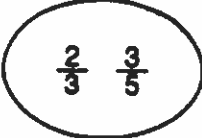
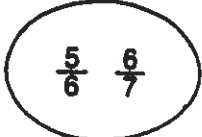
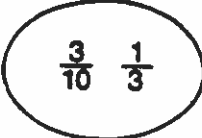
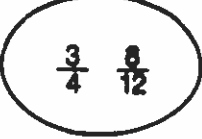
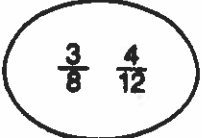
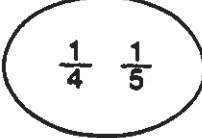
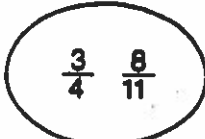

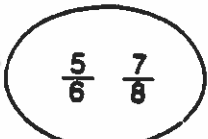
$$\frac{3}{5} = \frac{21}{35}$$

$$\frac{4}{7} = \frac{20}{35}$$

35 is the smallest common denominator for $\frac{3}{5}$ and $\frac{4}{7}$.

So, $\frac{3}{5} > \frac{4}{7}$, because $\frac{21}{35} > \frac{20}{35}$

Complete the equations so that each pair of fractions has the smallest common denominator. Then write the correct inequality symbol ($>$ or $<$) between the circled fractions.

<p>1-3.</p> <div style="text-align: center;">  </div> $\frac{2}{3} = \frac{\quad}{15}$ $\frac{3}{5} = \frac{\quad}{15}$	<p>4-6.</p> <div style="text-align: center;">  </div> $\frac{5}{6} = \frac{\quad}{\quad}$ $\frac{6}{7} = \frac{\quad}{\quad}$	<p>7-9.</p> <div style="text-align: center;">  </div> $\frac{3}{10} = \frac{\quad}{\quad}$ $\frac{1}{3} = \frac{\quad}{\quad}$
<p>10-12.</p> <div style="text-align: center;">  </div> $\frac{3}{4} = \frac{\quad}{\quad}$ $\frac{8}{12} = \frac{\quad}{\quad}$	<p>13-15.</p> <div style="text-align: center;">  </div> $\frac{3}{8} = \frac{\quad}{\quad}$ $\frac{4}{12} = \frac{\quad}{\quad}$	<p>16-18.</p> <div style="text-align: center;">  </div> $\frac{1}{4} = \frac{\quad}{\quad}$ $\frac{1}{5} = \frac{\quad}{\quad}$
<p>19-21.</p> <div style="text-align: center;">  </div> $\frac{3}{4} = \frac{\quad}{\quad}$ $\frac{8}{11} = \frac{\quad}{\quad}$	<p>22-24.</p> <div style="text-align: center;">  </div> $\frac{4}{7} = \frac{\quad}{\quad}$ $\frac{5}{9} = \frac{\quad}{\quad}$	<p>25-27.</p> <div style="text-align: center;">  </div> $\frac{5}{6} = \frac{\quad}{\quad}$ $\frac{7}{8} = \frac{\quad}{\quad}$

Write each set of fractions in order from smallest to greatest.

<p>1.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{3}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{12}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{5}{12}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{6}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{4}$</div> </div> <p style="text-align: center; margin-top: 20px;">— < — < — < — < —</p>	<p>2.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{5}{12}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{2}{3}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{2}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{7}{12}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{3}{4}$</div> </div> <p style="text-align: center; margin-top: 20px;">— < — < — < — < —</p>
<p>3.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{5}{12}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{2}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{4}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{7}{12}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{3}$</div> </div> <p style="text-align: center; margin-top: 20px;">— < — < — < — < —</p>	<p>4.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{2}{3}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{5}{6}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{2}{2}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{3}{4}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{7}{12}$</div> </div> <p style="text-align: center; margin-top: 20px;">— < — < — < — < —</p>

Write each set of fractions in order from greatest to smallest.

<p>5.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{6}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{3}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{0}{4}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{12}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{3}{12}$</div> </div> <p style="text-align: center; margin-top: 20px;">— > — > — > — > —</p>	<p>6.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{5}{12}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{2}{4}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{2}{3}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{7}{12}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{3}{4}$</div> </div> <p style="text-align: center; margin-top: 20px;">— > — > — > — > —</p>
<p>7.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{3}{4}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{3}{3}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{11}{12}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{5}{6}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{2}$</div> </div> <p style="text-align: center; margin-top: 20px;">— > — > — > — > —</p>	<p>8.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{1}{2}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{4}{6}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{7}{12}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{10}{12}$</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">$\frac{3}{4}$</div> </div> <p style="text-align: center; margin-top: 20px;">— > — > — > — > —</p>

THE BEST GUESS
(Fractions)

Which answer is best? Circle the answer.

1. $\frac{1}{3} + 1\frac{9}{10}$

Less than
2

More than
2

7. $3\frac{1}{10} \times 4$

Less than
12

More than
12

2. $1\frac{1}{2} - \frac{7}{8}$

Less than
1

More than
1

8. $5\frac{9}{10} \div 1\frac{1}{8}$

Less than
6

More than
6

3. $\frac{9}{10} \times \frac{7}{8}$

Less than
1

More than
1

9. $2\frac{7}{8} + 3\frac{7}{8} + 4\frac{7}{8}$

Less than
12

More than
12

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

Less than
2

More than
2

10. $8 - 2\frac{4}{5}$

Less than
6

More than
6

5. $3\frac{1}{8} + 2\frac{1}{32}$

Less than
 $5\frac{1}{2}$

More than
 $5\frac{1}{2}$

11. $3\frac{9}{10} \times 2\frac{9}{10}$

Less than
7

More than
7

6. $5\frac{2}{3} - 1\frac{1}{5}$

Less than
4

More than
4

12. $4\frac{1}{2} \div 5\frac{1}{2}$

Less than
1

More than
1



Fractions

...And More Adding and Subtracting

III. Mixed Numerals

$$3\frac{7}{8} + 5\frac{11}{24} = 3\frac{21}{24} + 5\frac{11}{24} = 8\frac{32}{24} = 9\frac{8}{24} = 9\frac{1}{3}$$

add

add

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

9. $1\frac{5}{6} + 4$

2. $5\frac{7}{10} - 1\frac{1}{6}$

10. $6\frac{7}{9} - 6\frac{1}{2}$

3. $8\frac{3}{8} + 9\frac{2}{3}$

11. $7\frac{1}{4} + 1\frac{7}{9} + 2\frac{5}{6}$

4. $6 - 2\frac{8}{11}$

12. $8\frac{1}{6} - 7\frac{3}{4}$

5. $2\frac{1}{16} + 2\frac{1}{3}$

13. $5 + 3\frac{3}{11}$

6. $7\frac{7}{8} - 7\frac{5}{12}$

14. $3\frac{5}{8} - 1\frac{6}{7}$

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

15. $4\frac{3}{7} + 5\frac{5}{14}$

8. $5\frac{1}{2} - \frac{11}{15}$

16. $6\frac{3}{12} - 3\frac{9}{36}$



Fractions

Multiplying Fractions

$$2\frac{1}{4} \cdot 1\frac{2}{3} = \frac{9}{4} \cdot \frac{5}{3} = \frac{\overset{3}{\cancel{9}}}{4} \cdot \frac{5}{\underset{1}{\cancel{3}}} = \frac{15}{4} \text{ or } 3\frac{3}{4}$$

Diagram illustrating the multiplication of mixed numbers. The first mixed number, $2\frac{1}{4}$, is converted to the improper fraction $\frac{9}{4}$. The second mixed number, $1\frac{2}{3}$, is converted to the improper fraction $\frac{5}{3}$. The two fractions are then multiplied: $\frac{9}{4} \cdot \frac{5}{3}$. The 9 in the numerator and the 3 in the denominator are crossed out, leaving a 3 above the 4 and a 5 below the 4. The result is $\frac{15}{4}$, which is written as the mixed number $3\frac{3}{4}$. Arrows labeled "rewrite" point from the mixed numbers to their respective improper fractions.

1. $\frac{1}{2} \cdot \frac{5}{6}$

10. $\frac{5}{6} \cdot 2$

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

11. $8\frac{1}{3} \cdot \frac{3}{4}$

3. $\frac{2}{5} \cdot \frac{1}{3}$

12. $4\frac{1}{4} \cdot 3\frac{1}{5}$

4. $\frac{16}{5} \cdot \frac{25}{27}$

13. $2\frac{1}{6} \cdot \frac{18}{20}$

5. $\frac{8}{21} \cdot 2\frac{7}{16}$

14. $\frac{21}{35} \cdot 3\frac{4}{7}$

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

15. $1\frac{3}{5} \cdot 2\frac{3}{16}$

7. $5\frac{7}{8} \cdot 4$

16. $6\frac{3}{4} \cdot 1\frac{5}{9}$

8. $\frac{5}{7} \cdot \frac{7}{5}$

17. $3\frac{1}{3} \cdot 1\frac{3}{18}$

9. $3\frac{2}{3} \cdot \frac{17}{22}$

18. $\frac{1}{2} \cdot \frac{6}{11} \cdot \frac{3}{5}$

Page 1

- 1) 3,044,621 2) 1,000,077 3) 9,600,102 4) 29,103,000.9 5) 1,100,171.13
1) 0 2) 7 3) 6 4) 4 5) 7 6) 4 7) 5

Page 2

- 1a) 1083 1b) 5914 1c) 3603 1d) 52,338
2a) 494 2b) 75 2c) 108 2d) 644 3a) 1550
3b) 10,570 3c) 64,165 3d) 79,189 4a) 4685
4b) 923 4c) 2829 4d) 5615 5a) 1582
5b) 11,238 5c) 77,312 5d) 21,622 6a) 8478
6b) 27,035 6c) 9023 6d) 24,111 7a) 638,188
7b) 54,865 7c) 358,606 7d) 556,639 8a) 1442
8b) 1797 8c) 4834 8d) 1256

Page 5

- 1) 224 2) 581 3) 256 4) 192 5) 5226 6) 7668
7) 2768 8) 4160 9) 5898 10) 47,848
11) 24,564 12) 59,612 13) 151,164
14) 458,175 15) 306,278 16) 517,856
17) 732,708 18) 326,790 19) 1,852,011
20) 1,906,768

Page 7

- 1) 2944 people 2) \$59 3) 148 days 4) \$81 5) 1343 steps 6) 298 pieces 7) 1496 miles
8) 191 calories 9) \$74 10) \$7,569,342,000

Page 10

- 1) 82; 99; 206; 488; 808; 2428
2) 690; 6844, 0; 9963; 9738; 6066
3) 96; 4088; 5903; 8826; 408; 48
4) 21; 256; 2; 6933
5) 241×2 ; 303×3 ; $2134 \times 2 = 4268$;
 $8063 \times 1 = 8063$

Page 11

- 1) 21,980 2) 3,062,212 3) 1,937,430
4) 91,154 5) 3,792,384 6) 3,059,848
7) 7,843,780 8) 4,110,526 9) 1,840,818
10) 29,184 11) 774,026 12) 6,889,224
13) 1,972,200 14) 1,429,632 15) 1,121,120

Page 12

- 1) 90;40 2) 900; 100 3) 1000; 40,000
4) 9; 10,000 5) 900,000; 4,000,000
6) 1,000,000; 40,000,000;
7) 90,000,000; 40 8) 15; 60 9) 1500; 100
10) 1000; 600,000 11) 10,000; 600

- 12) 1,500,000;60,000,000
13) 15,000,000; 1,000,000
14) 10,000,000; 6,000,000,000

Page 13

- 1) 182 2) 144 3) 229 4) 199 5) 128 6) 32
7) 94 8) 45 9) 228 10) 154 11) 19 12) 48
13) 60 14) 19 15) 33 --- 1) 11 2) 5 3) 8 4) 9
5) 3 6) 7 7) 9 8) 7 9) 7 10) 12 11) 7 12) 14
13) 11 14) 8 15) 28

Page 15

- 1) 409 2) 240 3) 303 4) 1057 5) 1005
6) 2406 7) 1040 8) 4050

Page 19

- 1) 243 students 2) 105 students 3) 80 days
4) \$810.00 5) \$2.30 6) 640 miles

Page 20

- 1) 20 minutes 2) 60 minutes 3) 90 points
4) 140 petals 5) 20 ounces 6) 800 bugs
7) 90 minutes 8) 496 parts

Page 22

- 1) More than \$20 2) Less than \$10
3) Less than \$88 4) Less than \$1
5) More than \$6 6) More than \$10
7) More than \$50 8) Less than \$1
9) More than \$8 10) Less than \$7
11) More than \$24 12) More than \$3.50

Page 23

- 1) 1.4 2) 1.16 3) 1.78 4) 6.5
5) 22.9 6) 36.14 7) 0.47 8) 106.4
9) 7.03 10) 0.5 11) 0.33 12) 0.3

Page 25

- 1) 0.422 2) 7.398 3) 76.1423 4) 1.53
5) 14.374 6) 0.192 7) 790.21 8) 5.0405
9) 12.2 10) 6.065, 6.269, 6.583, 6.843
11) 456.23, 456.37, 456.73, 465.32
12) 0.004, 0.035, 0.04, 0.305
13) 1.16, 1.066, 0.616, 0.06, 0.016
14) 95.51, 95.155, 91.5, 19.005, 9.05
15) 745.333, 745.303, 745.03, 745.003,
745.0003

Page 26

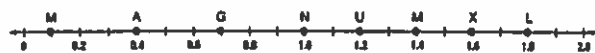
- 1) 9, 9.56 2) 730, 725 3) 500, 539
- 4) 720, 721 5) 410, 407 6) 700, 720
- 7) 7, 9.86 8) 1200, 1222 9) 8100, 8097
- 10) 520,000, 468,900 11) 6000, 6171
- 12) 3000, 2460 13) 2, 202 14) 8,000,000, 8,065,208 15) 15,000, 15,676

Page 28

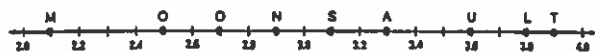
- 1) 46.0 2) 29.9 3) 15.17 4) 0.16 5) 308.9
- 6) 0.056 7) 0.6 8) 0.0 9) 3.0 10) 76.055
- 11) 12.19 12) 0.9 13) 330 14) 0.055
- 15) 6.0 16) 200 17) 84.0 18) 0.85
- 19) 12.764 20) 0.1

Page 29

Located in Cedar Point Park, Sandusky, Ohio, this roller coaster has the highest vertical drop.



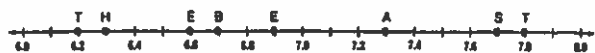
This Japanese roller coaster is one of the tallest in the world. It is 246 feet tall.



This large, looping roller coaster is found at Six Flags Magic Mountain in Valencia, California.



With a run of 1.4 miles, this roller coaster at Kings Island near Cincinnati, Ohio, may be the longest in the world.



Page 31

- 1) 7 2) 4 3) 7 4) 3 5) 30 6) 20 7) 22 8) 70
- 9) 7 10) 3 11) 6 12) 10 13) 20 14) 16
- 15) 12 16) 9 17) 7 18) 3 19) 11 20) 11 21) 13
- 22) 30 23) 8 24) 10 25) 24 26) 11 27) 50
- 28) 10 29) 33 30) 21 31) 7 32) 10 33) 4
- 34) 50 35) 60 36) 54 37) 20 38) 28 39) 50
- 40) 62 41) 33 42) 44 43) 24 44) 14 45) 3

Page 32

IT'S A PERFECT MEATING PLACE

Page 33

ONE WHO WANTS TO MARRY FOR BUTTER OR FOR VERSE

Page 34

- 1) $1/6$ 2) $3/4$ 3) $2/2$ 4) $6/12$ 5) $1/3$ 6) $1/3$ & $0/3$
- 7) $1/3$ & $1/6$ 8) $6/12$ & $1/6$ 9) $4/5$ 10) $6/12$
- 11) $2/2$ 12) $0/3$ 13) $3/12$ 14) $2/6$

Page 35

- 1) $1\frac{4}{11}$ 2) $4\frac{7}{8}$ 3) $1\frac{3}{10}$ 4) $2\frac{6}{11}$ 5) $4\frac{1}{12}$
- 6) $2\frac{3}{4}$ 7) $5\frac{1}{8}$ 8) $10\frac{1}{2}$ 9) $3\frac{2}{5}$ 10) $1\frac{5}{6}$
- 11) Two and one eighth 12) One and five sixths
- 13) Six and one fifth 14) One and one tenth
- 15) Four and one half 16) One and four ninths
- 17) Three and one eleventh 18) Four and three tenths
- 19) Five and one fourth
- 20) Three and two sevenths

Page 36

- 1) $9/12 = 3/4$ 2) $3/12 = 1/4$ 3) $11/24$ 4) $3/4$
- 5) $2/3$ 6) $1/3$ 7) $4/12 = 1/3$ 8) $9/12 = 3/4$

Page 37

- 1) 6 2) 4 3) 2 4) 6 5) 2 6) 10 7) 0 8) 8
- 9) 2 10) $2/6$ 11) $12/16$

Page 42

- 1) $>$ 2) $<$ 3) $<$ 4) $<$ 5) $<$ 6) $>$ 7) $>$ 8) $<$ 9) $>$

Page 43

- 1) 10 2) 9 3) $>$ 4) $35/42$ 5) $36/42$ 6) $<$ 7) $9/30$
- 8) $10/30$ 9) $<$ 10) $9/12$ 11) $8/12$ 12) $>$ 13) $9/24$
- 14) $8/24$ 15) $>$ 16) $5/20$ 17) $4/20$ 18) $>$
- 19) $33/44$ 20) $32/44$ 21) $>$ 22) $36/63$
- 23) $35/63$ 24) $>$ 25) $20/24$ 26) $21/24$ 27) $<$

Page 47

- 1) $1/12 < 1/6 < 1/4 < 1/3 < 5/12$
- 2) $5/12 < 1/2 < 7/12 < 2/3 < 3/4$
- 3) $1/4 < 1/3 < 5/12 < 1/2 < 7/12$
- 4) $7/12 < 2/3 < 3/4 < 5/6 < 2/2$
- 5) $1/3 > 3/12 > 1/6 > 1/12 > 0/4$
- 6) $3/4 > 2/3 > 7/12 > 2/4 > 5/12$
- 7) $3/3 > 11/12 > 5/6 > 3/4 > 1/2$
- 8) $10/12 > 3/4 > 4/6 > 7/12 > 1/2$

Page 48

- 1) More than 2 2) Less than 1 3) Less than 1
- 4) Less than 2 5) Less than $5\frac{1}{2}$ 6) More than 4
- 7) More than 12 8) Less than 6 9) Less than 12
- 10) Less than 6 11) More than 7 12) Less than 1

Page 49

- 1) $3\frac{3}{4}$ 2) $4\frac{8}{15}$ 3) $18\frac{1}{24}$ 4) $3\frac{3}{11}$
5) $4\frac{19}{48}$ 6) $11\frac{1}{24}$ 7) $10\frac{9}{10}$ 8) $4\frac{23}{30}$
9) $5\frac{5}{6}$ 10) $5\frac{1}{18}$ 11) $11\frac{31}{36}$ 12) $5\frac{1}{12}$
13) $8\frac{3}{11}$ 14) $1\frac{43}{56}$ 15) $9\frac{11}{14}$ 16) 3

Page 50

- 1) $5\frac{1}{12}$ 2) $1\frac{1}{2}$ 3) $2\frac{1}{15}$ 4) $2\frac{26}{27}$ 5) $13\frac{1}{14}$
6) $3\frac{6}{7}$ 7) $23\frac{1}{2}$ 8) 1 9) $2\frac{5}{6}$ 10) $1\frac{2}{3}$
11) $6\frac{1}{4}$ 12) $13\frac{3}{5}$ 13) $1\frac{19}{20}$ 14) $2\frac{1}{7}$
15) $3\frac{1}{2}$ 16) $10\frac{1}{2}$ 17) $3\frac{8}{9}$ 18) $9\frac{1}{55}$