

Mixed Numbers

	ISEE	SSAT	HSPT
Lower	X	X	
Middle	X	X	
Upper	X	X	X

Mixed numbers contain an integer followed by a proper fraction. Before trying to solve problems that contain mixed numbers, it's best to convert the mixed number into an improper fraction.

Mixed Numbers Exercise #1

Convert each mixed number into an improper fraction.

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

2. $3\frac{4}{5}$ _____

3. $4\frac{2}{9}$ _____

4. $5\frac{1}{6}$ _____

5. $6\frac{3}{7}$ _____

6. $2\frac{1}{12}$ _____

Helpful Hint

A **proper fraction** has a numerator that's smaller than the denominator.

An **improper fraction** has a denominator that's larger than the numerator.

Mixed Numbers Exercise #2

Convert each improper fraction into a mixed number.

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

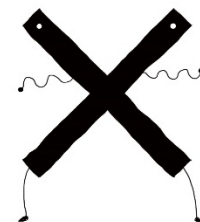
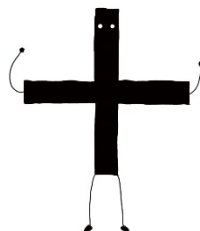
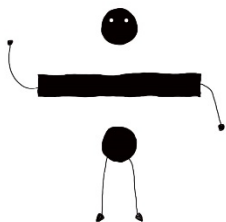
4. $\frac{17}{5}$ _____

2. $\frac{10}{3}$ _____

5. $\frac{23}{6}$ _____

3. $\frac{9}{4}$ _____

6. $\frac{19}{7}$ _____



Mixed Numbers Activity

- What is the value of the expression $2\frac{1}{3} + 3\frac{1}{2}$?
 - $5\frac{1}{5}$
 - $5\frac{5}{6}$
 - $6\frac{1}{6}$
 - $6\frac{5}{6}$
- What is the value of the expression $5 - 2\frac{1}{3}$?
 - $1\frac{1}{3}$
 - $2\frac{1}{3}$
 - $2\frac{2}{3}$
 - $3\frac{2}{3}$
- $3\frac{4}{5} \times 2\frac{1}{3} =$
 - $5\frac{1}{2}$
 - $6\frac{2}{15}$
 - $8\frac{13}{15}$
 - $10\frac{3}{8}$
- Sean has $5\frac{1}{2}$ slices of pizza. A day later, he only has $\frac{1}{3}$ of his pizza remaining. How many slices of pizza does he have left?
 - $1\frac{5}{6}$
 - $2\frac{1}{3}$
 - $3\frac{2}{3}$
 - $4\frac{1}{6}$
- $\frac{1}{2} \left(4\frac{1}{3} + 2\frac{1}{4} \right) =$
 - $3\frac{7}{24}$
 - $4\frac{5}{12}$
 - $5\frac{11}{24}$
 - $6\frac{7}{12}$
- What is the value of the expression $5\frac{1}{8} \div 2\frac{1}{4}$?
 - $1\frac{1}{2}$
 - $2\frac{5}{18}$
 - $4\frac{1}{12}$
 - $5\frac{1}{6}$

Percent Change

	ISEE	SSAT	HSPT
Lower			
Middle	X	X	
Upper	X	X	X

Percent change problems are the same as basic percent problems but with an extra step at the end. To answer these problems, you must calculate a percentage and then either add or subtract the percentage from the original number.

Percent Change Exercise

Increase and decrease each number by the given percent. Estimate if necessary.

Helpful Hint

Other ways to say percent change:

- discount
- mark-up
- increased by
- decreased by

Increase

Decrease

- | | | |
|---------------|-------|-------|
| 1. 100 by 15% | _____ | _____ |
| 2. 20 by 10% | _____ | _____ |
| 3. 30 by 20% | _____ | _____ |
| 4. 28 by 25% | _____ | _____ |
| 5. 15 by 33% | _____ | _____ |

Percent Change Activity

- | | |
|---|--|
| 1. Which value is 30% less than 20?
(A) 6
(B) 10
(C) 14
(D) 18 | 4. When x is increased by 25%, the result is 45. What is the value of x ?
(A) 20
(B) 36
(C) 44
(D) 52 |
| 2. Kyle has \$35. If he increases that amount by 20%, how much money will he have?
(A) \$7
(B) \$14
(C) \$42
(D) \$55 | 5. The Discount Sushi Emporium is running a sale on wasabi. During the first week of the sale, the price is discounted by 15%. During the second week of the sale, the price is discounted an additional 10%. If the wasabi was originally \$20, what price will customers pay during the second week of the sale?
(A) \$15.00
(B) \$15.30
(C) \$16.00
(D) \$16.30 |
| 3. Which value is equivalent to 16 increased by 75%?
(A) 4
(B) 12
(C) 24
(D) 28 | |

Statistics

	ISEE	SSAT	HSPT
Lower	X	X	
Middle	X	X	
Upper	X	X	X

Basic statistics are used to describe sets of numbers and to predict trends in data.

Statistics Exercise

Define each term.

1. mean _____

2. median _____

3. mode _____

4. range _____

5. line of best fit _____

6. quartile _____

7. standard deviation _____

Helpful Hint

You do NOT need to be able to calculate standard deviation. You simply need to be familiar with the concept.

Basic Statistics Activity

1. Kevin took 5 algebra quizzes and received scores of 64, 92, 86, 78, and 95. What is the range of his scores?

- (A) 31
- (B) 64
- (C) 83
- (D) 95

2. Tom is hitting balls at the local driving range. In his first 5 hits, the ball traveled 197 yards, 203 yards, 195 yards, 210 yards, and 191 yards. What is the median distance traveled by the ball during Tom's 5 hits?

- (A) 191 yards
- (B) 195 yards
- (C) 197 yards
- (D) 203 yards

3. Shelby is running laps for her upcoming track meet. Her recorded times are shown in the table.

Lap Number	Time (in seconds)
1	7.02
2	6.81
3	6.34
4	7.02
5	7.12

What is the mode of the data?

- (A) 6.34
- (B) 6.81
- (C) 7.02
- (D) 7.12

4. If George averages 17 points per game for the first 4 games of the basketball season, how many points will he score in the those 4 games?
- (A) 15
 - (B) 23
 - (C) 68
 - (D) 72
5. Jon's chemistry grade is the average of his 4 exam scores. Jon's scores on the first 3 exams were 96, 82, and 92. What is the lowest possible score Jon can make on the final exam and still earn a grade of 90?
- (A) 84
 - (B) 86
 - (C) 90
 - (D) 92
6. A set of consecutive integers has a range of 9 and a median of 5.5. What is the first quartile of the set?
- (A) 3
 - (B) 5
 - (C) 7
 - (D) 9