

# Placement Test

The Placement Test provides for three outcomes:

1. The student lacks the necessary skills to place in *Essentials for Algebra*.
2. The student places at lesson 1 of *Essentials for Algebra*.
3. The student places at lesson 16 of *Essentials for Algebra*.

The test has two sections: A and B.

1. Results from Section A determine the following:
  - a) The student lacks the necessary skills to place in *Essentials for Algebra*.
  - b) The student places at lesson 1.
  - c) The student should take Section B of the Placement Test.
2. Results from Section B determine the following:
  - a) The student places at lesson 1.
  - b) The student places at lesson 16.

## Administering the Placement Test

### DIRECTIONS

I'm going to pass out a test. Do not write anything until I tell you to start.

*(Pass out section A.)*

Write your name at the top.

You'll write your answers in pen, not pencil. You can use the front of the sheet or the back to figure out answers. Write your final answer to each problem in the box or where the answer belongs.

You have 12 minutes to complete the test, starting now.

*(Time students. Monitor their performance.)*

*(At the end of 12 minutes)*

Stop.

You're going to score your own tests. Exchange papers with a neighbor. ✓

You'll write **C** next to each answer that is correct and **X** next to each answer that is wrong.

Part 1, item **a**: The answer is 4.

*(Repeat for remaining items.)*

**Key:** **b.** zero **c.** 5 **d.** 3 **e.** 7 **f.** 2

**g.** 127 should not be circled.

**h.** 48 should be circled.

**i.** 150 should be circled.

**j.** 483 should not be circled.

**k.** 536 should be circled.

**l.** 5 **m.** 8 **n.** 6 **o.** 3 **p.** 7 **q.** 7 **r.** 3

**s.** 8 **t.** 9 **u.** 6

Part 2, Item **a**: The answer is 750.

*(Repeat for remaining items.)*

**Key:** **b:** 2798 **c:** 232 **d:** 364 **e:** 321 **f:** 379

**g:** 302 **h:** 1/4 **i:** 6/5 or 1 and 1/5

**j:** 5/72 **k:** 42/25 or 1 and 17/25.

Count all items marked with an **X**.

Write that number in the score box at the top of the test.

*(Observe students and give feedback.)*

*(Collect papers.)*

*(Pass out Section B to all students who missed 0–8 items.)*

Raise your hand when you're finished. I'll pick up your test.

*(Students who take Section B may require 30 minutes to complete all items.)*

*(Collect and grade tests.)*

## Placement Test Criteria

### SECTION A

Section A consists of 2 parts and 32 items. Placement is determined by totaling the errors made.

### CRITERIA

- Students who miss a total of 0–8 items should take Section B of the Placement Test.
- Students who miss a total of 9–11 items place at Lesson 1.
- Students who miss a total of 12 or more items do not have sufficient skills to place in *Essentials for Algebra*.

Section B consists of 8 parts and 40 items. All the items in Section B involve skills that are taught in the first 15 lessons of *Essentials for Algebra*. Students who demonstrate these skills are placed at Lesson 16. Students who do not demonstrate sufficient mastery are placed at Lesson 1. A student is placed at Lesson 1 by failing too many parts or by failing too many items.

### CRITERIA FOR PARTS

- Passing criterion for Parts 1–4: Students make no more than 2 errors on each part.
- Passing criterion for Part 5: Students make errors on no more than 2 **rows**.
- Passing criterion for Part 6: Students make errors on no more than 2 **equations**.
- Passing criterion for Parts 7 and 8: Students make no more than 1 error on each part.

### PLACEMENT CRITERIA

- Students who fail 3 or more parts place at Lesson 1.
- Students who make 12 or more errors place at Lesson 1.
- Students who fail 2 or fewer parts **and** who make 11 or fewer total errors place at Lesson 16.

Use the Placement Test Summary Chart on page 159 to record each student's performance and determine the placement for each student.

# Placement Test Summary Chart

Student Names											
<b>Section A</b> (number of errors)											
Select 1 of these	12 or more errors: <b>Insufficient skills</b>										
	9–11 errors: <b>Place at Lesson 1.</b>										
	0–8 errors: <b>Present Section B.</b>										
<b>Section B</b>											
<b>Part 1</b> (6 items) number of errors Check if 3 or more errors.											
<b>Part 2</b> (6 items) number of errors Check if 3 or more errors.											
<b>Part 3</b> (4 items) number of errors Check if 3 or more errors.											
<b>Part 4</b> (6 items) number of errors Check if 3 or more errors.											
<b>Part 5</b> (5 items) number of errors Check if 3 or more rows.											
<b>Part 6</b> (5 items) number of errors Check if 3 or more equations.											
<b>Part 7</b> (4 items) number of errors Check if 2 or more errors.											
<b>Part 8</b> (4 items) number of errors Check if 2 or more errors.											
<b>Number of Parts Failed</b> (total checks)											
3 or more parts failed: <b>Place at Lesson 1.</b>											
<b>Total Errors in Section B</b>											
12 or more errors: <b>Place at Lesson 1.</b>											
Fail 2 or fewer parts with 11 or fewer errors: <b>Place at Lesson 16.</b>											

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# Essentials for Algebra Placement Test

## Section A

Score

(Number missed)

Name \_\_\_\_\_

### Part 1

Answer each question.

5204

a. How many digits? \_\_\_\_\_

b. What's the tens digit? \_\_\_\_\_

c. What's the thousands digit? \_\_\_\_\_

d. How many digits? \_\_\_\_\_

217

e. What's the ones digit? \_\_\_\_\_

f. What's the hundreds digit? \_\_\_\_\_

◆ For items g through k, circle each even number.

g. 127

h. 48

i. 150

j. 483

k. 536

◆ Work items l through u.

l.  $4 \times \square = 20$

m.  $6 \times \square = 48$

n.  $9 \times \square = 54$

o.  $7 \times \square = 21$

p.  $6 \overline{)42}$

q.  $4 \overline{)28}$

r.  $9 \overline{)27}$

s.  $8 \overline{)64}$

t.  $7 \overline{)63}$

u.  $2 \overline{)12}$

## Section A (continued)

Score

(Number missed)

Name \_\_\_\_\_

### Part 2

Work each item.

a. 
$$\begin{array}{r} 125 \\ \times 6 \\ \hline \end{array}$$

b. 
$$\begin{array}{r} 3300 \\ - 502 \\ \hline \end{array}$$

c. 
$$\begin{array}{r} 14 \\ 125 \\ + 93 \\ \hline \end{array}$$

d. 
$$\begin{array}{r} 28 \\ \times 13 \\ \hline \end{array}$$

e.  $3 \overline{)963}$

f.  $2 \overline{)758}$

g.  $4 \overline{)1208}$

h. 
$$\begin{array}{r} \frac{11}{4} \\ - \frac{10}{4} \\ \hline \end{array}$$

i. 
$$\begin{array}{r} \frac{4}{5} \\ + \frac{2}{5} \\ \hline \end{array}$$

j.  $\frac{1}{8} \times \frac{5}{9} =$

k.  $\frac{7}{5} \left( \frac{6}{5} \right) =$

# Essentials for Algebra Placement Test

## Section B

Score

(Number missed)

Name \_\_\_\_\_

---

**Part 1**

Round each value to the nearest whole number. Then round each value to the nearest hundredth.

39.725

a. \_\_\_\_\_

b. \_\_\_\_\_

6.2489

c. \_\_\_\_\_

d. \_\_\_\_\_

0.513

e. \_\_\_\_\_

f. \_\_\_\_\_

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**Part 2**

Write each problem in a column and work it.

a.  $5.4 - 0.205$

b.  $104.2 + 9.75$

c.  $19 + 12.5 + 6.54$

d.  $6 - 4.15$

e.  $5.2 \times .003$

f.  $142 \times .7$

**Section B** (continued)

**Score**

**Name** \_\_\_\_\_

(Number missed)

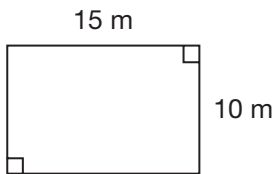
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**Part 3** Write the abbreviation for each unit name.

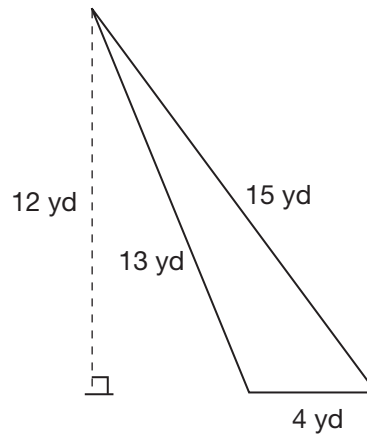
- a. centimeters \_\_\_\_\_      c. kilometer \_\_\_\_\_  
b. inches \_\_\_\_\_      d. feet \_\_\_\_\_

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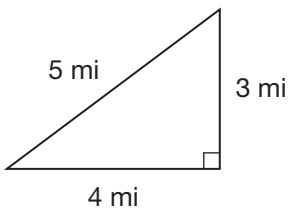
**Part 4** Find the area and perimeter of each figure.



- a. Area = \_\_\_\_\_  
b. Perimeter = \_\_\_\_\_



- e. Area = \_\_\_\_\_  
f. Perimeter = \_\_\_\_\_



- c. Area = \_\_\_\_\_  
d. Perimeter = \_\_\_\_\_

## Section B (continued)

Score

(Number missed)

Name \_\_\_\_\_

**Part 5** Complete each row to show the equivalent decimal, fraction, and percent.

	Decimal	Fraction	Percent
a.	4.02		
b.		$\frac{8}{100}$	
c.			70%
d.			5%
e.		$\frac{100}{100}$	

**Part 6** Complete each equation to show the equivalent fractions.

a.  $5 = \frac{\square}{6} = \frac{\square}{1}$

c.  $\frac{3}{4} = \frac{\square}{20}$

b.  $7 = \frac{\square}{2} = \frac{\square}{5}$

d.  $\frac{1}{5} = \frac{63}{\square}$

e.  $\frac{2}{7} = \frac{14}{\square}$



## Section B (continued)

Score

(Number missed)

Name \_\_\_\_\_

**Part 7** Complete each equation to show a fraction and a mixed number.

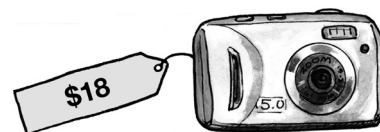
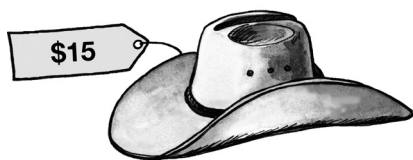
a.  $3\frac{5}{9} =$

b.  $1\frac{7}{8} =$

c.  $\frac{25}{3} =$

d.  $\frac{19}{5} =$

**Part 8** Work each problem.



- The price tags show the cost of each item.

- a. Briana bought shoes and a camera.  
How much did she spend?
- b. Roger bought one of everything  
except the shoes. How much did  
he spend?
- c. Maria had \$40. She bought the shoes.  
How much did she have left?
- d. Kahlil bought the hat and the gloves.  
He gave the clerk \$30.  
How much change did he get back?

Essentials for Algebra Placement Test

Section A

Score

Name \_\_\_\_\_

(Number missed)

Part 1 Answer each question.

- 5204
- a. How many digits? 4  
 b. What's the tens digit? 0  
 c. What's the thousands digit? 5
- 
- 217
- d. How many digits? 3  
 e. What's the ones digit? 7  
 f. What's the hundreds digit? 2

◆ For items g through k, circle each even number.

- g. 127    h. 48    i. 150    j. 483    k. 536

◆ Work items l through u.

- l.  $4 \times \boxed{5} = 20$     m.  $6 \times \boxed{8} = 48$     n.  $9 \times \boxed{6} = 54$
- o.  $7 \times \boxed{3} = 21$     p.  $6 \overline{)42} = \underline{7}$     q.  $4 \overline{)28} = \underline{7}$
- r.  $9 \overline{)27} = \underline{3}$     s.  $8 \overline{)64} = \underline{8}$     t.  $7 \overline{)63} = \underline{9}$
- u.  $2 \overline{)12} = \underline{6}$

Section A (continued)

Score

Name \_\_\_\_\_

(Number missed)

Part 2 Work each item.

- a.  $\begin{array}{r} 125 \\ \times 6 \\ \hline 750 \end{array}$     b.  $\begin{array}{r} 3300 \\ - 502 \\ \hline 2798 \end{array}$     c.  $\begin{array}{r} 14 \\ 125 \\ + 93 \\ \hline 232 \end{array}$     d.  $\begin{array}{r} 28 \\ \times 13 \\ \hline 84 \\ 280 \\ \hline 364 \end{array}$

- e.  $3 \overline{)963} = \underline{321}$     f.  $2 \overline{)758} = \underline{379}$     g.  $4 \overline{)1208} = \underline{302}$

- h.  $\begin{array}{r} 11 \\ 4 \\ - 10 \\ \hline 1 \\ 4 \end{array}$     i.  $\frac{4}{5}$     j.  $\frac{1}{8} \times \frac{5}{9} = \frac{5}{72}$     k.  $\frac{7}{5} \left( \frac{6}{5} \right) = \frac{42}{25}$  [or  $1\frac{17}{25}$ ]
- l.  $\begin{array}{r} 1 \\ 6 \\ + 2 \\ \hline 6 \\ 5 \end{array}$  [or  $1\frac{1}{5}$ ]

Essentials for Algebra Placement Test

Section B

Score

Name \_\_\_\_\_

(Number missed)

Part 1 Round each value to the nearest whole number. Then round each value to the nearest hundredth.

- 39.725    a. 40    b. 39.73  
 6.2489    c. 6    d. 6.25  
 0.513    e. 1    f. 0.51

Part 2 Write each problem in a column and work it.

- a.  $5.4 - 0.205$   
 $\begin{array}{r} 5.400 \\ - 0.205 \\ \hline 5.195 \end{array}$
- b.  $104.2 + 9.75$   
 $\begin{array}{r} 104.2 \\ + 9.75 \\ \hline 113.95 \end{array}$
- c.  $19 + 12.5 + 6.54$   
 $\begin{array}{r} 19 \\ 12.5 \\ + 6.54 \\ \hline 38.04 \end{array}$
- d.  $6 - 4.15$   
 $\begin{array}{r} 6.00 \\ - 4.15 \\ \hline 1.85 \end{array}$
- e.  $5.2 \times .003$   
 $\begin{array}{r} 5.2 \\ \times .003 \\ \hline .0156 \end{array}$
- f.  $142 \times .7$   
 $\begin{array}{r} 142 \\ \times .7 \\ \hline 99.4 \end{array}$

Section B (continued)

Score

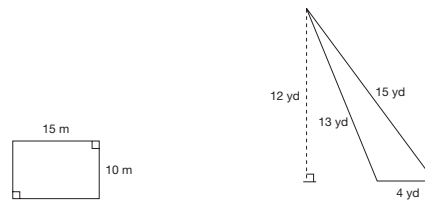
Name \_\_\_\_\_

(Number missed)

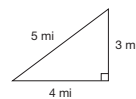
Part 3 Write the abbreviation for each unit name.

- a. centimeters cm    c. kilometer km  
 b. inches in.    d. feet ft

Part 4 Find the area and perimeter of each figure.



- a. Area = 150 sq m    e. Area = 24 sq yd  
 b. Perimeter = 50 m    f. Perimeter = 32 yd



- c. Area = 6 sq mi  
 d. Perimeter = 12 mi

Section B (continued)

Score

(Number missed)

Name \_\_\_\_\_

**Part 5** Complete each row to show the equivalent decimal, fraction, and percent.

	Decimal	Fraction	Percent
a.	4.02	$\frac{402}{100}$	402%
b.	.08	$\frac{8}{100}$	8%
c.	.70	$\frac{70}{100}$	70%
d.	.05	$\frac{5}{100}$	5%
e.	1.00	$\frac{100}{100}$	100%

**Part 6** Complete each equation to show the equivalent fractions.

a.  $5 = \frac{30}{6} = \frac{5}{1}$       c.  $\frac{3}{4} = \frac{15}{20}$

b.  $7 = \frac{14}{2} = \frac{35}{5}$       d.  $\frac{1}{5} = \frac{63}{315}$

e.  $\frac{2}{7} = \frac{14}{49}$

Section B (continued)

Score

(Number missed)

Name \_\_\_\_\_

**Part 7** Complete each equation to show a fraction and a mixed number.

a.  $3\frac{5}{9} = \frac{32}{9}$     b.  $1\frac{7}{8} = \frac{15}{8}$     c.  $\frac{25}{3} = 8\frac{1}{3}$     d.  $\frac{19}{5} = 3\frac{4}{5}$

**Part 8** Work each problem.



The price tags show the cost of each item.

- a. Briana bought shoes and a camera. How much did she spend?
- $$\begin{array}{r} \$29.50 \\ + 18 \\ \hline \$47.50 \end{array}$$
- b. Roger bought one of everything except the shoes. How much did he spend?
- $$\begin{array}{r} \$15 \\ 12.99 \\ + 18 \\ \hline \$45.99 \end{array}$$
- c. Maria had \$40. She bought the shoes. How much did she have left?
- $$\begin{array}{r} \$40.00 \\ - 29.50 \\ \hline \$10.50 \end{array}$$
- d. Kahilil bought the hat and the gloves. He gave the clerk \$30. How much change did he get back?
- $$\begin{array}{r} \$15 \\ + 12.99 \\ \hline \$27.99 \end{array} \qquad \begin{array}{r} \$30.00 \\ - 27.99 \\ \hline \$ 2.01 \end{array}$$