

## Lesson 2-4ab Solve Equations with Variables on Each Side Homework

Write and solve an equation to solve each exercise.

<p><b>1. PLUMBING</b> A1 Plumbing Service charges \$35 per hour plus a \$25 travel charge for a service call. Good Guys Plumbing Repair charges \$40 per hour for a service call with no travel charge. How long must a service call be for the two companies to charge the same amount?</p>	<p><b>2. EXERCISE</b> Mike’s Fitness Center charges \$30 per month for a membership. All-Day Fitness Club charges \$22 per month plus an \$80 initiation fee for a membership. After how many months will the total amount paid to the two fitness clubs be the same?</p>
<p><b>3. SHIPPING</b> The Lone Star Shipping Company charges \$14 plus \$2 a pound to ship an overnight package. Discount Shipping Company charges \$20 plus \$1.50 a pound to ship an overnight package. For what weight is the charge the same for the two companies?</p>	<p><b>4. BACKPACKING</b> Guido and Raoul each went backpacking in Glacier National Park. The expressions <math>4(d + 2) - 2d</math> and <math>3(2 + d)</math> represent the respective distances Guido and Raoul hiked each day. On what day number <math>d</math> will their distance hiking be the same?</p>

Question 5	Question 6	Question 7
$4a - 3(a - 2) = 2(3a - 2)$	$14 - 2(3p + 1) = 6(4 + p)$	$x - (4x - 7) = 5x - (x + 21)$



### Common Core Spiral Review

Determine if the value of the variable is a solution of each equation. Select yes or no.

a.  $5x - 4 = 31, x = 5.4$

yes     no

b.  $\frac{3}{4}n + 4 = 10, n = 8$

yes     no

c.  $-3 + 4y = 7, y = 2.5$

yes     no

**MULTIPLE CHOICE REGENTS REVIEW: Comparing Real #'s**

**DIRECTIONS:** *to get compare real #'s, they all must be in the same form. To get full credit, you cannot just circle the multiple choice answer. You MUST show the compared in the same form. Using a calculator would be helpful.*

- 1 Which expression has the smallest value?
- $-\pi$
  - $-\sqrt{10}$
  - $-\frac{16}{5}$
  - $-3.02$
- 2 Which number has the greatest value?
- $1\frac{2}{3}$
  - $\sqrt{2}$
  - $\frac{\pi}{2}$
  - $1.5$
- 3 In which list are the numbers in order from least to greatest?
- $3.2, \pi, 3\frac{1}{3}, \sqrt{3}$
  - $\sqrt{3}, 3.2, \pi, 3\frac{1}{3}$
  - $\sqrt{3}, \pi, 3.2, 3\frac{1}{3}$
  - $3.2, 3\frac{1}{3}, \sqrt{3}, \pi$
- 4 Which numbers are arranged from smallest to largest?
- $3.14, \frac{22}{7}, \pi, \sqrt{9.1}$
  - $\sqrt{9.1}, \pi, 3.14, \frac{22}{7}$
  - $\sqrt{9.1}, 3.14, \frac{22}{7}, \pi$
  - $\sqrt{9.1}, 3.14, \pi, \frac{22}{7}$
- 5 Which list is in order from smallest value to largest value?
- $\sqrt{10}, \frac{22}{7}, \pi, 3.1$
  - $3.1, \frac{22}{7}, \pi, \sqrt{10}$
  - $\pi, \frac{22}{7}, 3.1, \sqrt{10}$
  - $3.1, \pi, \frac{22}{7}, \sqrt{10}$
- 6 Which list shows the numbers  $|-0.12|, \sqrt{\frac{1}{82}}, \frac{1}{8}, \frac{1}{9}$  in order from smallest to largest?
- $|-0.12|, \frac{1}{8}, \frac{1}{9}, \sqrt{\frac{1}{82}}$
  - $\frac{1}{8}, \frac{1}{9}, \sqrt{\frac{1}{82}}, |-0.12|$
  - $\sqrt{\frac{1}{82}}, |-0.12|, \frac{1}{9}, \frac{1}{8}$
  - $\sqrt{\frac{1}{82}}, \frac{1}{9}, |-0.12|, \frac{1}{8}$
- 7 In which group are the numbers arranged in order from smallest value to largest value?
- $\pi, 3.14, \sqrt{9.86}, \frac{22}{7}$
  - $\sqrt{9.86}, \frac{22}{7}, 3.14, \pi$
  - $\frac{22}{7}, 3.14, \pi, \sqrt{9.86}$
  - $3.14, \sqrt{9.86}, \pi, \frac{22}{7}$
- 8 Which is the correct arrangement of these terms in order of value, from smallest to greatest?
- $3\sqrt{2}, 4\frac{1}{8}, |-4.24|, \sqrt[3]{75}$
  - $\sqrt[3]{75}, |-4.24|, 4\frac{1}{8}, 3\sqrt{2}$
  - $4\frac{1}{8}, \sqrt[3]{75}, |-4.24|, 3\sqrt{2}$
  - $4\frac{1}{8}, |-4.24|, \sqrt[3]{75}, 3\sqrt{2}$
- 9 Which inequality is true if  $x = \frac{3.04}{1.48}$ ,  $y = 1.99 + 0.33$ , and  $z = (1.3)^3$ ?
- $y < z < x$
  - $y < x < z$
  - $x < z < y$
  - $x < y < z$