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

Write and solve an equation to solve each exercise.

1. PLUMBING 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?

5 = h

2. EXERCISE 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?

M = 10

3. SHIPPING 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 = 12

4. BACKPACKING Guido and Raoul each went backpacking in Glacier National Park. The expressions $4(d + 2) - 2d$ and $3(2 + d)$ represent the respective distances Guido and Raoul hiked each day. On what day number d will their distance hiking be the same?

D = 2

Question 5	Question 6	Question 7
$4a - 3(a - 2) = 2(3a - 2)$	$14 - 2(3p + 1) = 6(4 + p)$	$x - (4x - 7) = 5x - (x + 21)$
A = 2	**P = -1**	**X = 11.5**

CCSS 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?
  1) $-\pi$
  2) $-\sqrt{10}$
  3) $-\dfrac{16}{5}$ *(circled)*
  4) -3.02

2 Which number has the greatest value?
  1) $1\dfrac{2}{3}$ *(circled)*
  2) $\sqrt{2}$
  3) $\dfrac{\pi}{2}$
  4) 1.5

3 In which list are the numbers in order from least to greatest?
  1) $3.2, \pi, 3\dfrac{1}{3}, \sqrt{3}$
  2) $\sqrt{3}, 3.2, \pi, 3\dfrac{1}{3}$
  3) $\sqrt{3}, \pi, 3.2, 3\dfrac{1}{3}$ *(circled)*
  4) $3.2, 3\dfrac{1}{3}, \sqrt{3}, \pi$

4 Which numbers are arranged from smallest to largest?
  1) $3.14, \dfrac{22}{7}, \pi, \sqrt{9.1}$
  2) $\sqrt{9.1}, \pi, 3.14, \dfrac{22}{7}$
  3) $\sqrt{9.1}, 3.14, \dfrac{22}{7}, \pi$
  4) $\sqrt{9.1}, 3.14, \pi, \dfrac{22}{7}$ *(circled)*

5 Which list is in order from smallest value to largest value?
  1) $\sqrt{10}, \dfrac{22}{7}, \pi, 3.1$
  2) $3.1, \dfrac{22}{7}, \pi, \sqrt{10}$
  3) $\pi, \dfrac{22}{7}, 3.1, \sqrt{10}$
  4) $3.1, \pi, \dfrac{22}{7}, \sqrt{10}$ *(circled)*

6 Which list shows the numbers $|-0.12|, \sqrt{\dfrac{1}{82}}, \dfrac{1}{8}, \dfrac{1}{9}$ in order from smallest to largest?
  1) $|-0.12|, \dfrac{1}{8}, \dfrac{1}{9}, \sqrt{\dfrac{1}{82}}$
  2) $\dfrac{1}{8}, \dfrac{1}{9}, \sqrt{\dfrac{1}{82}}, |-0.12|$
  3) $\sqrt{\dfrac{1}{82}}, |-0.12|, \dfrac{1}{9}, \dfrac{1}{8}$
  4) $\sqrt{\dfrac{1}{82}}, \dfrac{1}{9}, |-0.12|, \dfrac{1}{8}$ *(circled)*

7 In which group are the numbers arranged in order from smallest value to largest value?
  1) $\pi, 3.14, \sqrt{9.86}, \dfrac{22}{7}$
  2) $\sqrt{9.86}, \dfrac{22}{7}, 3.14, \pi$
  3) $\dfrac{22}{7}, 3.14, \pi, \sqrt{9.86}$
  4) $3.14, \sqrt{9.86}, \pi, \dfrac{22}{7}$ *(circled)*

8 Which is the correct arrangement of these terms in order of value, from smallest to greatest?
  1) $3\sqrt{2}, 4\dfrac{1}{8}, |-4.24|, \sqrt[3]{75}$
  2) $\sqrt[3]{75}, |-4.24|, 4\dfrac{1}{8}, 3\sqrt{2}$
  3) $4\dfrac{1}{8}, \sqrt[3]{75}, |-4.24|, 3\sqrt{2}$ *(circled)*
  4) $4\dfrac{1}{8}, |-4.24|, \sqrt[3]{75}, 3\sqrt{2}$

9 Which inequality is true if $x = \dfrac{3.04}{1.48}$, $y = 1.99 + 0.33$, and $z = (1.3)^3$?
  1) $y < z < x$
  2) $y < x < z$
  3) $x < z < y$ *(circled)*
  4) $x < y < z$