Section 3.6 Solving Decimal Equations

Round-off error   **The difference between the exact answer and a rounded answer.**

Examples

1. Four people are sharing the cost of a monthly phone bill.   If the bill is $58.25, what is each person's share of the bill?

$x =$ amt $ each person

$$\frac{4x}{4} = \frac{58.25}{4} \qquad x = \$14.5625$$
$$x = \$14.57 \text{ each person.}$$

2. Solve 26x - 32 = 99. Round to the nearest tenth.

$$26x - 32 = 99$$
$$ +32 \ \ +32$$
$$\frac{26x}{26} = \frac{131}{26}$$
$$x \approx 5.03846$$
$$x \approx 5$$

3. Solve 9.92x - 6.13 = 5.96 - 7.28x. Round to the nearest hundredth.

$$9.92x - 6.13 = 5.96 - 7.28x$$
$$+7.28x + 7.28x$$
$$\overline{}$$
$$17.2x - 6.13 = 5.96$$
$$ + 6.13 \ \ 6.13$$
$$17.2x = 12.09$$
$$x \approx .7029$$
$$x \approx .7$$

4. Solve 3.7x - 2.5 = 6.1x - 12.2. Round to the nearest tenth.

$$-3.7x -3.7x$$
$$-2.5 = 2.4x - 12.2$$
$$+12.2 +12.2$$
$$\overline{}$$
$$\frac{9.7}{2.4} = \frac{2.4x}{2.4} \qquad x \approx 4.0416$$
$$x \approx 4$$

5. You are shopping for a necklace to match your earrings. The sales tax is 6%. You have a total of $21.25 to spend. What is your price limit for the necklace?

.06

$n =$ necklace

$$n(1.06) = 21.25$$
$$\frac{}{1.06} \qquad\qquad \frac{}{1.06}$$

$n \approx 20.047$
$n \approx \$20.04$