

# Math Sheet

Name \_\_\_\_\_ Score \_\_\_\_\_ / 10 Teacher \_\_\_\_\_ Date \_\_\_\_\_

## Multi-Step Decimal Equations

Solve exactly, then round the final value to the nearest hundredth.

1.  $1.6 = 4.7(-3.6 + 1.3n)$

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6.  $-3.7 = 4w + 3.8 + 3.8$

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2.  $2.7 + 5.1x = -3.2 (4.1 + 2.9x)$

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7.  $3.2p + 4.7 + 2.2 = -1.4$

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3.  $-3.7 (4.4 + 4.5x) = 1.4 + 3x$

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8.  $1.2(3.5 + -3.8 y) = 3.3$

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4.  $3(2.6z + 5.1) = 1.5 + -4.5 z$

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9.  $1.2h + 4h = 4.3$

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5.  $4.3 + 3.4n = -1.4 (3.8n + 2.4)$

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10.  $-1.3 = 2.5s + 2s$

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# Math Sheet

Name \_\_\_\_\_ Score \_\_\_\_\_ / 10 Teacher \_\_\_\_\_ Date \_\_\_\_\_

## Multi-Step Decimal Equations

### Answer Key

Solve exactly, then round the final value to the nearest hundredth.

1.  $1.6 = 4.7(-3.6 + 1.3n)$

$$1.6 = 6.11n - 16.92$$

Rewrite each side in equivalent affine form, distributing and collecting when needed.

$$-6.11n + 1.6 = -16.92$$

Move variable terms by doing the same operation to both sides.

$$-6.11n = -18.52$$

Move constants by doing the same operation to both sides.

$$n = \frac{1852}{611}$$

Exact value. Divide both sides by the nonzero coefficient.

**Rounded value (n): 3.03**

$$1.6 = 4.7(-3.6 + 1.3 \times \frac{1852}{611})$$

Substitute the exact value into the original equation.

2.  $2.7 + 5.1x = -3.2 (4.1 + 2.9x)$

$$5.1x + 2.7 = -9.28x - 13.12$$

Rewrite each side in equivalent affine form, distributing and collecting when needed.

$$14.38x + 2.7 = -13.12$$

Move variable terms by doing the same operation to both sides.

$$14.38x = -15.82$$

Move constants by doing the same operation to both sides.

$$x = -\frac{791}{719}$$

Exact value. Divide both sides by the nonzero coefficient.

**Rounded value (x): -1.10**

$$2.7 + 5.1 \times (-\frac{791}{719}) = -3.2 (4.1 + 2.9 \times (-\frac{791}{719}))$$

Substitute the exact value into the original equation.

3.  $-3.7 (4.4 + 4.5x) = 1.4 + 3x$

$$-16.65x - 16.28 = 3x + 1.4$$

Rewrite each side in equivalent affine form, distributing and collecting when needed.

$$-19.65x - 16.28 = 1.4$$

Move variable terms by doing the same operation to both sides.

$$-19.65x = 17.68$$

Move constants by doing the same operation to both sides.

$$x = -\frac{1768}{1965}$$

Exact value. Divide both sides by the nonzero coefficient.

**Rounded value (x): -0.90**

$$-3.7 (4.4 + 4.5 \times (-\frac{1768}{1965})) = 1.4 + 3 \times (-\frac{1768}{1965})$$

Substitute the exact value into the original equation.

## Multi-Step Decimal Equations

### Answer Key

Solve exactly, then round the final value to the nearest hundredth.

4.  $3(2.6z + 5.1) = 1.5 + -4.5z$

$$7.8z + 15.3 = -4.5z + 1.5$$

Rewrite each side in equivalent affine form, distributing and collecting when needed.

$$12.3z + 15.3 = 1.5$$

Move variable terms by doing the same operation to both sides.

$$12.3z = -13.8$$

Move constants by doing the same operation to both sides.

$$z = -\frac{46}{41}$$

Exact value. Divide both sides by the nonzero coefficient.

**Rounded value (z): -1.12**

$$3(2.6 \times (-\frac{46}{41}) + 5.1) = 1.5 + -4.5 \times (-\frac{46}{41})$$

Substitute the exact value into the original equation.

5.  $4.3 + 3.4n = -1.4(3.8n + 2.4)$

$$3.4n + 4.3 = -5.32n - 3.36$$

Rewrite each side in equivalent affine form, distributing and collecting when needed.

$$8.72n + 4.3 = -3.36$$

Move variable terms by doing the same operation to both sides.

$$8.72n = -7.66$$

Move constants by doing the same operation to both sides.

$$n = -\frac{383}{436}$$

Exact value. Divide both sides by the nonzero coefficient.

**Rounded value (n): -0.88**

$$4.3 + 3.4 \times (-\frac{383}{436}) = -1.4(3.8 \times (-\frac{383}{436}) + 2.4)$$

Substitute the exact value into the original equation.

6.  $-3.7 = 4w + 3.8 + 3.8$

$$-3.7 = 4w + 7.6$$

Rewrite each side in equivalent affine form, distributing and collecting when needed.

$$-4w - 3.7 = 7.6$$

Move variable terms by doing the same operation to both sides.

$$-4w = 11.3$$

Move constants by doing the same operation to both sides.

$$w = -2.825$$

Exact value. Divide both sides by the nonzero coefficient.

**Rounded value (w): -2.83**

$$-3.7 = 4 \times (-2.825) + 3.8 + 3.8$$

Substitute the exact value into the original equation.

## Multi-Step Decimal Equations

### Answer Key

Solve exactly, then round the final value to the nearest hundredth.

7.  $3.2p + 4.7 + 2.2 = -1.4$

$$3.2p + 6.9 = -1.4$$

Rewrite each side in equivalent affine form, distributing and collecting when needed.

$$3.2p = -8.3$$

Move constants by doing the same operation to both sides.

$$p = -2.59375$$

Exact value. Divide both sides by the nonzero coefficient.

**Rounded value (p): -2.59**

$$3.2 \times (-2.59375) + 4.7 + 2.2 = -1.4$$

Substitute the exact value into the original equation.

8.  $1.2(3.5 + -3.8y) = 3.3$

$$-4.56y + 4.2 = 3.3$$

Rewrite each side in equivalent affine form, distributing and collecting when needed.

$$-4.56y = -0.9$$

Move constants by doing the same operation to both sides.

$$y = \frac{15}{76}$$

Exact value. Divide both sides by the nonzero coefficient.

**Rounded value (y): 0.20**

$$1.2(3.5 + -3.8 \times \frac{15}{76}) = 3.3$$

Substitute the exact value into the original equation.

9.  $1.2h + 4h = 4.3$

$$5.2h = 4.3$$

Rewrite each side in equivalent affine form, distributing and collecting when needed.

$$h = \frac{43}{52}$$

Exact value. Divide both sides by the nonzero coefficient.

**Rounded value (h): 0.83**

$$1.2 \times \frac{43}{52} + 4 \times \frac{43}{52} = 4.3$$

Substitute the exact value into the original equation.

10.  $-1.3 = 2.5s + 2s$

$$-1.3 = 4.5s$$

Rewrite each side in equivalent affine form, distributing and collecting when needed.

$$-4.5s - 1.3 = 0$$

Move variable terms by doing the same operation to both sides.

$$-4.5s = 1.3$$

Move constants by doing the same operation to both sides.

$$s = -\frac{13}{45}$$

Exact value. Divide both sides by the nonzero coefficient.

**Rounded value (s): -0.29**

$$-1.3 = 2.5 \times (-\frac{13}{45}) + 2 \times (-\frac{13}{45})$$

Substitute the exact value into the original equation.