

Math Sheet

Name _____ Score _____ / 10 Teacher _____ Date _____

Two-Step Decimal Equations

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

1. $-6.9 = \frac{2}{3} \times q + (-6.5)$

6. $\frac{(z + (-4.4))}{-1.6} = 2.8$

2. $-2.3 = \frac{2}{5} \times f + 1.9$

7. $5 = \frac{(6.8 - c)}{4.3}$

3. $\frac{(w + 1.8)}{4} = 6.7$

8. $2.1h + 1.5 = 6.8$

4. $1.5n + (-4.4) = 5.1$

9. $2.5k + 3.5 = 3$

5. $3.7 = \frac{(6.6 - q)}{-2}$

10. $-3.7 = \frac{2}{3} \times y + 1.2$

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Two-Step Decimal Equations

Answer Key

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

1. $-6.9 = \frac{2}{3} \times q + (-6.5)$

$$-6.9 = \frac{2}{3}q - 6.5$$

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

$$-\frac{2}{3}q - 6.9 = -6.5$$

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

$$-\frac{2}{3}q = 0.4$$

Move constants by doing the same operation to both sides.

$$q = -0.6$$

Exact value. Divide both sides by the nonzero coefficient.

Rounded value (q): -0.60

$$-6.9 = \frac{2}{3} \times (-0.6) + (-6.5)$$

Substitute the exact value into the original equation.

2. $-2.3 = \frac{2}{5} \times f + 1.9$

$$-2.3 = 0.4f + 1.9$$

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

$$-0.4f - 2.3 = 1.9$$

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

$$-0.4f = 4.2$$

Move constants by doing the same operation to both sides.

$$f = -10.5$$

Exact value. Divide both sides by the nonzero coefficient.

Rounded value (f): -10.50

$$-2.3 = \frac{2}{5} \times (-10.5) + 1.9$$

Substitute the exact value into the original equation.

3. $\frac{(w + 1.8)}{4} = 6.7$

$$0.25w + 0.45 = 6.7$$

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

$$0.25w = 6.25$$

Move constants by doing the same operation to both sides.

$$w = 25$$

Exact value. Divide both sides by the nonzero coefficient.

Rounded value (w): 25.00

$$\frac{(25 + 1.8)}{4} = 6.7$$

Substitute the exact value into the original equation.

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

4. $1.5n + (-4.4) = 5.1$

$$1.5n - 4.4 = 5.1$$

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

$$1.5n = 9.5$$

Move constants by doing the same operation to both sides.

$$n = \frac{19}{3}$$

Exact value. Divide both sides by the nonzero coefficient.

Rounded value (n): 6.33

$$1.5 \times \frac{19}{3} + (-4.4) = 5.1$$

Substitute the exact value into the original equation.

5. $3.7 = \frac{(6.6 - q)}{-2}$

$$3.7 = 0.5q - 3.3$$

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

$$-0.5q + 3.7 = -3.3$$

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

$$-0.5q = -7$$

Move constants by doing the same operation to both sides.

$$q = 14$$

Exact value. Divide both sides by the nonzero coefficient.

Rounded value (q): 14.00

$$3.7 = \frac{(6.6 - 14)}{-2}$$

Substitute the exact value into the original equation.

6. $\frac{(z + (-4.4))}{-1.6} = 2.8$

$$-0.625z + 2.75 = 2.8$$

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

$$-0.625z = 0.05$$

Move constants by doing the same operation to both sides.

$$z = -0.08$$

Exact value. Divide both sides by the nonzero coefficient.

Rounded value (z): -0.08

$$\frac{(-0.08 + (-4.4))}{-1.6} = 2.8$$

Substitute the exact value into the original equation.

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7. $5 = \frac{(6.8 - c)}{4.3}$

$$5 = -\frac{10}{43}c + \frac{68}{43}$$

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

$$\frac{10}{43}c + 5 = \frac{68}{43}$$

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

$$\frac{10}{43}c = -\frac{147}{43}$$

Move constants by doing the same operation to both sides.

$$c = -14.7$$

Exact value. Divide both sides by the nonzero coefficient.

Rounded value (c): -14.70

$$5 = \frac{(6.8 - (-14.7))}{4.3}$$

Substitute the exact value into the original equation.

8. $2.1h + 1.5 = 6.8$

$$2.1h = 5.3$$

Move constants by doing the same operation to both sides.

$$h = \frac{53}{21}$$

Exact value. Divide both sides by the nonzero coefficient.

Rounded value (h): 2.52

$$2.1 \times \frac{53}{21} + 1.5 = 6.8$$

Substitute the exact value into the original equation.

9. $2.5k + 3.5 = 3$

$$2.5k = -0.5$$

Move constants by doing the same operation to both sides.

$$k = -0.2$$

Exact value. Divide both sides by the nonzero coefficient.

Rounded value (k): -0.20

$$2.5 \times (-0.2) + 3.5 = 3$$

Substitute the exact value into the original equation.

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10. $-3.7 = \frac{2}{3} \times y + 1.2$

$$-3.7 = \frac{2}{3}y + 1.2$$

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

$$-\frac{2}{3}y - 3.7 = 1.2$$

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

$$-\frac{2}{3}y = 4.9$$

Move constants by doing the same operation to both sides.

$$y = -7.35$$

Exact value. Divide both sides by the nonzero coefficient.

Rounded value (y): -7.35

$$-3.7 = \frac{2}{3} \times (-7.35) + 1.2$$

Substitute the exact value into the original equation.