

ACCELERATED: Chapter 8 Quiz #1 Review (Lessons 1-4)

Lesson 1 Homework Practice - Solving Equations with Rational Coefficients

Solve each equation. Check your solutions.

$$1. \frac{8}{7} \cdot \frac{7}{8} y = \frac{36}{1} \left(\frac{8}{7} \right)$$

$$y = 64$$

$$2. \frac{4}{1} \cdot \frac{1}{4} w = 12 \left(\frac{4}{1} \right)$$

$$w = 48$$

$$3. \frac{-3.5u}{-3.5} = \frac{-14}{-3.5}$$

$$u = 4$$

$$3 \overline{) 14.0}$$

$$\underline{-14.0}$$

$$0$$

$$4. \frac{9.1d}{9.1} = \frac{-7.28}{9.1}$$

$$d = -0.8$$

$$9.1 \overline{) 7.28}$$

$$\underline{-7.28}$$

$$0$$

5. The product of a number and -6.5 is -58.5 . Write and solve an equation to find the number.

$$-6.5n = -58.5$$

$$\frac{-6.5n}{-6.5} = \frac{-58.5}{-6.5}$$

$$n = 9$$

$$6.5 \overline{) 58.5}$$

$$\underline{-58.5}$$

$$0$$

6. One pound of ground beef makes four hamburger patties. Write and solve an equation to determine how many pounds of beef are needed to make 36 hamburgers.

$$4x = 36$$

$$\frac{4x}{4} = \frac{36}{4}$$

$$x = 9$$

Lesson 2 Homework Practice - Solving Two-Step Equations

Solve each equation. Check your solutions.

$$1. 21q - 11 = -210.5$$

$$+11 \quad +11$$

$$21q = -199.5$$

$$\frac{21q}{21} = \frac{-199.5}{21}$$

$$q = -9.5$$

$$21 \overline{) 199.5}$$

$$\underline{189}$$

$$105$$

$$\underline{-105}$$

$$0$$

$$2. -\frac{1}{6}v + 1 = 0$$

$$-1 \quad -1$$

$$-\frac{1}{6}v = -1$$

$$v = 6$$

$$3. 7h + 20 = -8$$

$$-20 \quad -20$$

$$7h = -28$$

$$\frac{7h}{7} = \frac{-28}{7}$$

$$h = -4$$

$$4. \frac{7}{8}k - 40 = -26$$

$$+40 \quad +40$$

$$\frac{7}{8}k = 14$$

$$k = 16$$

$$5. \frac{1}{2}w - 16 = 5$$

$$+16 \quad +16$$

$$\frac{1}{2}w = 21$$

$$w = 42$$

$$6. \frac{1}{4}s - 5 = 1$$

$$+5 \quad +5$$

$$\frac{1}{4}s = 6$$

$$s = 24$$

$$7. 1 - \frac{1}{9}a = 0$$

$$\frac{1}{9}a = 1$$

$$a = 9$$

$$8. 4w - w - 26 = 19$$

$$3w - 26 = 19$$

$$+26 \quad +26$$

$$3w = 45$$

$$\frac{3w}{3} = \frac{45}{3}$$

$$w = 15$$

$$9. 5(-4 + y) - 1 = -23$$

$$-3y + 4 = -23$$

$$-4 \quad -4$$

$$-3y = -27$$

$$\frac{-3y}{-3} = \frac{-27}{-3}$$

$$y = 9$$

Lesson 3 Homework Practice - Writing Equations

Translate each sentence into an equation.

1. Eight less than 7.2 times a number is -29.6.

$$7.2n - 8 = -29.6$$

2. Twenty more than twice a number is 52.

$$2n + 20 = 52$$

3. The difference between one-third of a number and 11 is 10.

$$\frac{1}{3}n - 11 = 10$$

Solve each problem by writing and solving an equation.

4. Last summer, Gary trained 32 more dogs than Zina. Together they trained 126 dogs. How many dogs did Gary train?

$$z = \text{dogs zina trained}$$

$$z + 32 = \text{dogs Gary trained}$$

$$z + z + 32 = 126$$

$$2z + 32 = 126$$

$$-32 \quad -32$$

$$2z = 94$$

$$z = 47$$

$$\text{Gary} = 47 + 32$$

$$= 79$$

5. Julius sold five times as many computers as Sam sold last year. In total, they sold 78 computers. How many computers did Julius sell?

~~$$j = \text{Julius sold}$$~~

$$s = \text{sam sold}$$

$$5s = \text{julius sold}$$

$$s + 5s = 78$$

$$6s = 78$$

$$s = 13$$

$$\text{julius sold } 13 \times 5 = 65$$

$$\begin{array}{r} 13 \\ 6 \overline{) 78} \end{array}$$

$$\frac{6}{18}$$

6. In one season, Ana ran 18 races. This was four fewer races than twice the number of races Kelly ran. How many races did Kelly run?

$$2k - 4 = 18$$

$$+4 \quad +4$$

$$\frac{2k}{2} = \frac{22}{2}$$

$$k = 11$$

7. André hit four more home runs than twice the number of home runs Larry hit. Together they hit 10 home runs. How many home runs did André hit?

$$l = \text{larry}$$

$$\text{andre} = 2l + 4$$

$$2l + 4 + l = 10$$

$$3l + 4 = 10$$

$$-4 \quad -4$$

$$3l = 6$$

$$l = 2$$

$$\text{Andrea} = 2(2) + 4 = 8$$

8. The sixth grade has collected \$116.75 for a local animal shelter. Their goal is to collect \$500. They have 3 weeks left. How much money must they collect each week?

$$3x + 116.75 = 500$$

$$-116.75 \quad -116.75$$

$$3x = 383.25$$

$$x = 127.75$$

$$\begin{array}{r} 499.91 \\ 500.00 \\ -116.75 \\ \hline \end{array}$$

$$383.25$$

$$\begin{array}{r} 127.75 \\ 3 \overline{) 383.25} \\ \underline{360} \\ 23.25 \\ \underline{21} \\ 2.25 \\ \underline{2.25} \\ 0 \end{array}$$

Lesson 4 Homework Practice - More Two-Step Equations

Solve each equation.

$$1. \frac{4(t-2)}{4} = \frac{12}{4}$$

$$t-2=3$$

$$+2 \quad +2$$

$$t=5$$

$$4. \frac{42}{7} = \frac{7(p-13)}{7}$$

$$6=p-13$$

$$+13 \quad +13$$

$$p=19$$

$$7. \frac{3.4(x-12)}{3.4} = \frac{13.6}{3.4}$$

$$x-12=4$$

$$+12 \quad +12$$

$$x=16$$

$$\begin{array}{r} 4 \\ 34 \overline{) 136} \\ \underline{136} \\ 0 \end{array}$$

$$10. \frac{4(n+6)}{4} = \frac{18}{4}$$

$$n+6=4.5$$

$$-6 \quad -6$$

$$n=-1.5$$

$$\begin{array}{r} 4.5 \\ 4 \overline{) 18.0} \\ \underline{16} \downarrow \\ 20 \\ \underline{20} \\ 0 \end{array}$$

$$2. \frac{5(y+3)}{5} = \frac{25}{5}$$

$$y+3=5$$

$$-3 \quad -3$$

$$y=2$$

$$5. \frac{4}{3} \cdot \frac{3}{4} (h+6) = 15 \left(\frac{4}{3} \right)$$

$$h+6=20$$

$$-6 \quad -6$$

$$h=14$$

$$8. \frac{5}{3} \cdot \frac{3}{5} (n+12.6) = 21 \left(\frac{5}{3} \right)$$

$$n+12.6=35.0$$

$$-12.6 \quad -12.6$$

$$n=22.4$$

$$11. \frac{4.1(t+1)}{4.1} = \frac{12.3}{4.1}$$

$$t+1=3$$

$$-1 \quad -1$$

$$t=2$$

$$\begin{array}{r} 3 \\ 4 \overline{) 12.3} \\ \underline{12} \downarrow \\ 3 \\ \underline{3} \\ 0 \end{array}$$

$$3. \frac{45}{9} = \frac{9(x-5)}{9}$$

$$x-5=5$$

$$+5 \quad +5$$

$$x=10$$

$$6. \frac{11}{9} \cdot \frac{9}{11} (s-1) = 22 \left(\frac{11}{9} \right)$$

$$s-1=22$$

$$+1 \quad +1$$

$$s=23$$

$$9. \frac{5(d-3)}{5} = \frac{17.5}{5}$$

$$d-3=3.5$$

$$+3 \quad +3$$

$$d=6.5$$

$$\begin{array}{r} 3.5 \\ 5 \overline{) 17.5} \\ \underline{15} \downarrow \\ 25 \\ \underline{25} \\ 0 \end{array}$$

$$12. \frac{-8(k-3.6)}{-8} = \frac{36}{-8}$$

$$k-3.6=-4.5$$

$$+3.6 \quad +3.6$$

$$k=-0.9$$

$$\begin{array}{r} 4.5 \\ 8 \overline{) 36.0} \\ \underline{32} \downarrow \\ 40 \\ \underline{40} \\ 0 \end{array}$$

$$-4.5 + 3.6$$

Solve each problem by writing and solving an equation.

13. Tyler is going to the movie theater with two of his friends. In addition to purchasing a ticket, each of them also buys a box of popcorn for \$5.50. If the total amount the three friends spent altogether is \$41.25, then what is the cost for a movie ticket?

$$3(x+5.50) = 41.25$$

$$x+5.50=13.75$$

$$-5.50 \quad -5.50$$

$$x=8.25$$

$$\begin{array}{r} 13.75 \\ 3 \overline{) 41.25} \\ \underline{9} \downarrow \\ 22 \\ \underline{21} \downarrow \\ 15 \end{array}$$

14. Jessica purchases 4 of the same type of scented candles, each of which are on sale for \$2 off. After the discount was applied, the total cost for the candles is \$19.00. What is the regular price of each candle?

$$4(x-2) = 19$$

$$x-2=4.75$$

$$+2 \quad +2$$

$$x=6.75$$

$$\begin{array}{r} 4.75 \\ 4 \overline{) 19.00} \\ \underline{16} \downarrow \\ 30 \\ \underline{28} \downarrow \\ 20 \\ \underline{20} \\ 0 \end{array}$$