Key

Daffynition Decoder

Flu shot:

A		J	A	B		W	E	L	L		D	O	N	E
$10\frac{1}{2}$	$6\frac{1}{4}$	1350	$10\frac{1}{2}$	$\frac{10}{11}$	$-3\frac{6}{7}$	$\frac{2}{5}$	$5\frac{3}{5}$	−96	−96	$-2\frac{1}{2}$	$-4\frac{2}{7}$	6	−24	$5\frac{3}{5}$

Fourth of July:

J	U	S	T		U	N	D	E	R		E	I	G	H	T		D	A	Y	S
1350	15	$-2\frac{2}{3}$	$-2\frac{4}{5}$	$13\frac{1}{3}$	15	−24	$-4\frac{2}{7}$	$5\frac{3}{5}$	$\frac{3}{4}$	1410	$5\frac{3}{5}$	21	20	$-6\frac{2}{3}$	$-2\frac{4}{5}$	−45	$-4\frac{2}{7}$	$10\frac{1}{2}$	$-4\frac{1}{2}$	$-2\frac{2}{3}$

Solve each equation or problem and find your solution in the code. Each time the solution appears, write the exercise letter above it.

R $12x + 5 = 14$

$12x = 9$

$\frac{12x}{12} = \frac{9}{12}$

$x = \frac{3}{4}$

W $4 - 20y = -4$

$-20y = -8$

$\frac{-20y}{-20} = \frac{-8}{-20}$

$y = \frac{2}{5}$

S $9a - 2 = -26$

$9a = -24$

$\frac{9a}{9} = \frac{-24}{9}$

$a = -2\frac{2}{3}$

I $\frac{2}{3}x - 4 = 10$

$\frac{2}{3}x = 14$

$(\frac{3}{2})\frac{2}{3}x = 14(\frac{3}{2})$

$x = 21$

N $-\frac{3}{4}n + 7 = 25$

$-\frac{3}{4}n = 18$

$(-\frac{4}{3})-\frac{3}{4}n = 18(-\frac{4}{3})$

$n = -24$

G $9 - \frac{2}{5}k = 1$

$-\frac{2}{5}k = -8$

$(-\frac{5}{2})-\frac{2}{5}k = -8(-\frac{5}{2})$

$k = 20$

O $\frac{9}{2}m - 3 = 24$

$\frac{9}{2}m = 27$

$(\frac{2}{9})\frac{9}{2}m = 27(\frac{2}{9})$

$m = 6$

U $8 - \frac{4}{3}t = -12$

$-\frac{4}{3}t = -20$

$(-\frac{3}{4})-\frac{4}{3}t = -20(-\frac{3}{4})$

$t = 15$

L $\frac{5}{8}q + 60 = 0$

$\frac{5}{8}q = -60$

$(\frac{8}{5})\frac{5}{8}q = -60(\frac{8}{5})$

$q = -96$

A $\frac{2}{7}y + 8 = 11$

$\frac{2}{7}y = 3$

$(\frac{7}{2})\frac{2}{7}y = 3(\frac{7}{2})$

$y = 10\frac{1}{2}$

H $-\frac{3}{5}u - 9 = -5$

$-\frac{3}{5}u = 4$

$(-\frac{5}{3})-\frac{3}{5}u = 4(-\frac{5}{3})$

$u = -6\frac{2}{3}$

Y $-1 + \frac{10}{3}h = -16$

$\frac{10}{3}h = -15$

$(\frac{3}{10})\frac{10}{3}h = -15(\frac{3}{10})$

$h = -4\frac{1}{2}$

B $\frac{11}{2}w + 7 = 12$

$\frac{11}{2}w = 5$

$(\frac{2}{11})\frac{11}{2}w = 5(\frac{2}{11})$

$w = \frac{10}{11}$

T $\frac{1}{15} - \frac{1}{6}v = \frac{8}{15}$

$-\frac{1}{6}v = \frac{7}{15}$

$(-\frac{6}{1})-\frac{1}{6}v = \frac{7}{15}(-\frac{6}{1})$

$v = -2\frac{4}{5}$

D $\frac{7}{8}p = -\frac{15}{4}$

$(\frac{8}{7})\frac{7}{8}p = -\frac{15}{4}(\frac{8}{7})$

$p = -4\frac{2}{7}$

E The Trek Club plans to hike 20 miles today. The hikers have covered 6 miles so far. If they travel at an average speed of $2\frac{1}{2}$ mph, how many hours will it take to complete the hike?

_____h

$2\frac{1}{2}x + 6 = 20$

$\frac{5}{2}x = 14$

$(\frac{2}{5})\frac{5}{2}x = 14(\frac{2}{5})$

$x = 5\frac{3}{5}$ hours

J You are a salesperson for Worldwide Widgets. Each week you earn $200 plus two ninths of your sales. What dollar amount of sales do you need this week to earn $500?

$ _____

$200 + \frac{2}{9}x = 500$

$\frac{2}{9}x = 300$

$(\frac{9}{2})\frac{2}{9}x = 300(\frac{9}{2})$

$x = \$1350$

Fractions: Solving Equations with Fractions

Pre-Algebra

3.5 Solving Equations

Homework - - Solving Equations with Fractions

Key

Name: _____

Date: _____

Hour: _____

Solve the following equations. Be sure to show your work.

*How are these problems different than the problems on the other side of this handout?

1.) $\frac{x+3}{5} = 2$

$\left(\frac{5}{1}\right)\frac{x+3}{5} = 2(5)$

$x + 3 = 10$

$-3 \quad -3$

$\boxed{x = 7}$

2.) $\frac{x-7}{3} = -4$

$\left(\frac{3}{1}\right)\frac{x-7}{3} = -4(3)$

$x - 7 = -12$

$+7 \quad +7$

$\boxed{x = -5}$

3.) $\frac{2x+11}{-3} = 5$

$\left(\frac{-3}{1}\right)\frac{2x+11}{-3} = 5(-3)$

$2x + 11 = -15$

$-11 \quad -11$

$2x = -26$

$\frac{2x}{2} = \frac{-26}{2}$

$\boxed{x = -13}$

4.) $\frac{-5x-4}{2} = -7$

$\left(\frac{2}{1}\right)\frac{-5x-4}{2} = -7(2)$

$-5x - 4 = -14$

$+4 \quad +4$

$-5x = -10$

$\frac{-5x}{-5} = \frac{-10}{-5}$

$\boxed{x = 2}$