

Solving Equations Review

Warm-Up Monday (in your notes)

1. $3(x - 2) = -4x + 1$

$$\begin{array}{rcl} 3x - 6 & = & -4x + 1 \\ +4x & & +4x \end{array}$$

$$\begin{array}{rcl} 7x - 6 & = & 1 \\ +6 & & +6 \end{array}$$

$$\begin{array}{rcl} 7x & = & 7 \\ \underline{7} & & \underline{7} \\ x & = & 1 \end{array}$$

$$x = 1$$

Solving Equations Review

EQ: HOW DO I SOLVE AN EQUATION?

2. $\frac{6x^2}{6} = \frac{54}{6}$

$$x = \pm 3$$

$$\sqrt{x^2} = \sqrt{9}$$

3. $(\sqrt{2x-1})^2 = (3)^2$

$$2x - 1 = 9$$

$$+1 \quad +1$$

$$\frac{2x}{2} = \frac{10}{2}$$

$$x = 5$$

What Do You Call Someone Who Can't Turn Pancakes?

Cross out the letter pair next to each correct solution.

For each letter pair you DON'T cross out, write the upper case letter in the box containing the lower case letter.

a	b	c	d	e	f	g	h	i	j	k	l	m
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1 $9y + 4 = 2y + 25$

2 $5n - 2 = n + 18$

3 $11 + 8q = 3q - 19$

4 $-3 - 10x = 25 + 4x$

5 $15a = 6a - 90$

6 $24 - 5d = d$

7 Xavier is thinking of a number. Nine more than four times the number is the same as fifteen less than twice the number. What is Xavier's number?

8 $2 + 11b = 8b + 15$

9 $7m + 32 = 12 - m$

10 $16 - 5y = 1 - 4y$

11 $2x - 8x + 1 = 9 - 10x$

12 $-3t - 8 + 7t = 34 + 9t - 2$

13 $2a + 3a + 4a = 5a - 18$

14 Yvonne is thinking of a number. Fifty, decreased by three times the number, is the same as seven times the number, increased by 80. What is Yvonne's number?

15 $5(x + 4) = 7x - 26$

16 $20 - 9w = 4(15 - w)$

17 $2(11 + 3n) = 12n$

18 $10 - 4(p + 7) = 2(1 - p)$

19 $11x = 8x - 3(5 - 2x)$

20 $9 - 6(4u - 1) = u + 15$

21 Zabato is thinking of a number. Three times the sum of the number and ten is the same as eight times the number. What is Zabato's number?

e • N 4
a • P -6
f • I -1
d • R -12
l • F 3
b • A 7
i • E -10
g • S 5
j • L -9
k • U -2

c • N 15
k • O -6
e • H $-2\frac{1}{2}$
m • T -3
g • P $-3\frac{3}{4}$
a • R -8
l • S $4\frac{1}{3}$
h • D 2
d • F 11
i • L $-4\frac{1}{2}$

e • T -8
l • V 6
h • S -10
l • P 18
m • E $3\frac{2}{3}$
e • L -9
c • N 0
i • G 23
a • P 5
i • F $6\frac{1}{3}$

Equations and Problems:
Solving Equations With the Variable on Both Sides

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Why Do Cowboys Have So Much Trouble With Math?

Solve each equation or problem and find your solution in the answer column.
Write the letter of the answer in each box that contains the exercise number.
If the answer has a \bullet , shade in the box instead of writing a letter in it.

① $8x + 15 = 3x - 20$

③ $18 - 5y = y + 4$

⑤ $11d = 81 - 16d$

⑦ $10b - 25 - 3b = 4b - 1$

⑨ The Sun Spa charges annual dues of \$125 plus \$10 per hour to use the facilities. The Moon Spa charges annual dues of \$230 plus \$7 per hour to use the facilities. For what number of hours would the two spas charge the same total amount?

⑪ $9(m - 2) = m + 40$

⑬ $5x + 2(11 - 4x) = 82 + x$

⑮ $7(7c + 1) - 4c = 13(3c - 2)$

⑰ $3q - 16q = 7 + 2(-8q - 3)$

⑱ Simon says: "Five times my age 4 years ago is the same as 3 times my age in 2 years." How old is Simon now?

② $9n - 2 = 7n + 50$

④ $-7a - 10 = 20 - 3a$

⑥ $-22 - x = 5 + 6x + 9$

⑧ $33 + 15w = 3w - w + 4w$

⑫ $3(2p + 7) = 15(p - 4)$

⑭ $16 - 5(3t - 4) = 8(-2t + 11)$

⑯ $12(5 + 2y) = 4y - (6 - 9y)$

⑲ $14 - 3(5t - 12) = 1 - (20t + 1)$

Answers 1-9

(A) 8
(I) $-7\frac{1}{2}$
(K) 38
 \bullet $-5\frac{1}{7}$
(O) -7
(P) $-3\frac{2}{3}$
(T) 3
(E) $2\frac{1}{3}$
(D) 35
(C) $-4\frac{1}{4}$
(S) 26
(J) 5

Answers 10-18

(M) 18
(L) $-5\frac{1}{2}$
(N) 13
(G) 9
(R) -10
(B) $-7\frac{3}{4}$
 \bullet 52
(W) $7\frac{1}{4}$
(F) 12
(H) $\frac{1}{3}$
(Y) -15
(U) -6

5	16	3	12	6	7	14	10	7	12	2	13	17	1	15	18	9	6	5	16	4	18	11	2	13	15	8
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Solving Equations Review

EQ: HOW DO I SOLVE AN EQUATION?

$$4x^2 = 1$$

$$\sqrt{x + 74} = 0$$