Why Do Girls Like Guys Who Wear Shirts With Eight Buttons?

Solve each equation below and find your solution at the bottom of the page.
Write the letter of that equation above the solution.

(E) $4(5n - 7) = 10n + 2$

(N) $9(x + 3) = 4x - 3$

(A) $2(12 - 8x) = x - 11x$

(H) $3t + 8(2t - 6) = 2 + 14t$

(E) $2v + 18 = 16 - 4(v + 7)$

(I) $4x - (9 - 3x) = 8x - 1$

(T) $12(3 + y) = 5(2y + 8)$

(A) $-7(1 - 4m) = 13(2m - 3)$

(Y) $9(11 - k) = 3(3k - 9)$

(S) $4x + 5(7x - 3) = 9(x - 5)$

(T) $2(6d + 3) = 18 - 3(16 - 3d)$

(F) $8(4u - 1) - 12u = 11(2u - 6)$

(C) $-5 - (15y - 1) = 2(7y - 16) - y$

2	10	3	7	9	29	4	−1	1	−8	−6	−16	−12	−5

BOOKS NEVER WRITTEN

Yours Forever by

$\frac{84}{5}$	$\frac{20}{3}$	$-\frac{3}{2}$	$-\frac{3}{2}$	$\frac{20}{3}$	$\frac{32}{3}$	-12	$\frac{11}{4}$	$\frac{12}{7}$	$\frac{84}{5}$	$\frac{20}{3}$	15	$\frac{32}{3}$

The Incompetent Bullfighter by

$\frac{5}{8}$	$\frac{33}{16}$	$-\frac{43}{4}$	$\frac{11}{4}$	$\frac{33}{16}$	-12	$\frac{38}{7}$	$-\frac{3}{2}$	21	$\frac{11}{4}$	$\frac{11}{4}$	$\frac{8}{9}$

ABOVE ARE THE TITLES OF TWO "BOOKS NEVER WRITTEN." TO DECODE THE NAMES OF THEIR AUTHORS, FOLLOW THESE DIRECTIONS:

Solve each equation below and find the solution in the code. Each time the solution appears, write the letter of that exercise above it.

(U) $\frac{x}{6}=\frac{7}{2}$

(E) $\frac{a}{8}=\frac{4}{3}$

(Y) $\frac{2}{9}=\frac{t}{4}$

(O) $\frac{8}{11}=\frac{3}{2y}$

(G) $\frac{1}{6x}=\frac{4}{15}$

(I) $\frac{k+5}{7}=\frac{5}{3}$

(B) $\frac{x-4}{2}=\frac{x+1}{9}$

(N) $\frac{7}{d+5}=\frac{10}{d+2}$

(A) $\frac{x}{4}=\frac{2x+3}{15}$

(M) $\frac{21}{y-8}=3$

(R) $\frac{17-4x}{12}=5$

(T) $\frac{11u}{6}=u+14$

(D) $\frac{2n+3}{4}=\frac{5n-1}{6}$

(L) $\frac{15}{8x-3}=\frac{1}{2+2x}$

What Sound Did the Sheep Hear When Her Sister Exploded?

Solve each equation and find your answer in the rectangle below. Cross out the box that contains your answer. When you finish, write the letters from the remaining boxes in the spaces at the bottom of the page.

① $\frac{2}{x+3}+\frac{3}{x+4}=\frac{7}{x^2+7x+12}$

② $\frac{4}{x-5}+\frac{1}{x+2}=\frac{2x+7}{x^2-3x-10}$

③ $\frac{a-30}{a^2+4a-21}=\frac{5}{a+7}-\frac{2}{a-3}$

④ $\frac{x}{x+4}=\frac{3}{x-1}$

⑤ $\frac{6}{y+2}+\frac{1}{y-2}=1$

⑥ $\frac{3}{n}+\frac{2}{n-1}=2$

⑦ $2=\frac{x}{x+3}-\frac{3}{x-5}$

⑧ $\frac{1}{d-7}+\frac{d}{d-2}=\frac{5}{d^2-9d+14}$

⑨ $\frac{x-1}{x+1}-\frac{6}{x-3}=3$

YE	SI	CK	SB	AM	SH	OO	FR	KO	MB	IG	UP	AH	ER
6, 1	−5, 2	−1	−9	−3, 1	$-\frac{1}{2}$	2, 8	−7, 3	−2	$\frac{1}{4}$, −1	$\frac{1}{2}$, 3	$\frac{4}{3}$	$\frac{1}{3}$, 5	6, −2

OBJECTIVE 3–h: To solve fractional equations (solving a quadratic equation may be required).

Analyzing and Solving Polynomial Equations

Date_____ Period____

State the number of complex roots, the possible number of real and imaginary roots, the possible number of positive and negative roots, and the possible rational roots for each equation. Then find all roots.

1) $x^4 - 5x^2 - 36 = 0$

2) $x^3 + 3x^2 - 14x - 20 = 0$

3) $x^3 - 2x^2 + 3x - 6 = 0$

4) $x^4 - 14x^2 + 45 = 0$

5) $x^4 + 6x^2 + 8 = 0$

6) $x^4 + 3x^2 - 18 = 0$

7) $x^3 - 1 = 0$

8) $x^3 + 3x^2 - x - 3 = 0$

Solving Absolute Value Equations and Inequalities Worksheet Name:_____

1. Solve each equation. Be sure to check your solutions.

a. $|x-6|=8$

b. $|x+2|=-8$

c. $|-9x|=64$

d. $|-7x+4|=18$

e. $|4x+4|=28$

f. $5|n+10|=10$

g. $|1-6n|+3=46$

h. $\frac{|3v-2|}{5}=4$

2. Solve each inequality and graph its solution on a number line. Be sure to show your test points.

a. $|n+9| \leq 1$

b. $|-7x| = 28$

c. $|8-6m| > 32$

d. $|-9+p|+5 < 24$

e. $|x-2| > 3$

f. $2|x-2| = 6$

SOLVE for x.

1. $x^2 - 3x = 4$

2. $x^2 = 10x - 25$

3. $x^2 - 5 = 3$

4. $(x+4)^2 = 8$

5. $x^2 - 6x + 8 = 0$

6. $3x^2 - 7x + 2 = 0$

7. $x^2 - 3x + 1 = 6$

8. $4x^2 + 7x + 2 = 0$

9. $8x^2 = 200$

10. $4x^2 - 6x - 1 = 0$