

SOLVING ONE STEP EQUATIONS (MULTIPLY / DIVIDE) ANSWERS - PAGE 1
ALTERNATIVE METHOD

HEY MAX, I KNOW YOU ALREADY HELPED ME WITH SOLVING ONE STEP EQUATIONS FOR ADDING AND SUBTRACTING, BUT WHAT ABOUT MULTIPLICATION AND DIVISION.

WELL POE...IT'S PRACTICALLY THE SAME THING. YOU ALREADY KNOW THAT ADDITION AND SUBTRACTION ARE OPPOSITES. WELL, SO ARE MULTIPLICATION AND DIVISION.

HUH, THAT SOUNDS EASY ENOUGH, BUT CAN YOU SHOW US AN EXAMPLE?

GOOD IDEA...CHECK THIS OUT. DO YOU SEE HOW THE FOUR IS RIGHT NEXT TO THE c? THAT JUST MEANS $4 \times c = 32$.

$4c = 32$

WAIT A SECOND, NOW I REMEMBER. THE LETTERS AND NUMBERS DO NOT LIKE EACH OTHER, AND THEY WANT TO BE ON OPPOSITE SIDES.

EXACTLY, SO WE BUILD THE IMAGINARY WALL AND TRY TO GET THE VARIABLES ON ONE SIDE AND THE NUMBERS ON THE OTHER.

AND IF WE LOOK AT THE PROBLEM, THE FOUR IS THE BEST NUMBER TO MOVE.

AND SINCE IT FLEW OVER TO THE OPPOSITE SIDE YOU NEED TO DO THE OPPOSITE OF MULTIPLICATION, WHICH IS?

DIVISION. SO I DO 32 DIVIDED BY 4, WHICH EQUALS 8.

THIS MEANS DIVISION ($4 \mid 32$).

BEFORE YOU MOVE ON, CHECK OUT THESE EXAMPLES.

OPPOSITE OF MULTIPLICATION IS DIVISION.

OPPOSITE OF DIVISION IS MULTIPLICATION.

1. $24 = 4w$
 $\frac{24}{4} = \frac{4w}{4}$
 $6 = w$

2. $\frac{k}{5} = 20$
 $\frac{k}{5} \cdot 5 = 20 \cdot 5$
 $k = 100$

SOLVING ONE STEP EQUATIONS PRACTICE - B ANSWERS - PAGE 3

CHECK THESE OUT. AFTER YOU MOVE THE NUMBER THERE IS A NEGATIVE STILL NEXT TO THE VARIABLE. YOU HAVE TO MOVE IT TOO.

1. $15 = -\frac{t}{3}$
 $\times 3$
 $15 \cdot 3 = -\frac{t}{3} \cdot 3$
 $45 = -t$
 $-45 = t$

2. $-7f = 77$
 $\div 7$
 $\frac{-7f}{7} = \frac{77}{7}$
 $-f = 11$
 $f = -11$

SEE IF YOUR ANSWER MAKES SENSE.

$15 = -t/3$
 $15 = -(-45)/3$
 $15 = 15$

SEE IF YOUR ANSWER MAKES SENSE.

$-7f = 77$
 $-7(-11) = 77$
 $+77 = 77$

SOLVE EACH EQUATION.

3. $12 = -\frac{w}{6}$
 $w = -72$

4. $\frac{y}{10} = 30$
 $y = 300$

5. $-7u = 119$
 $u = -17$

6. $32 = \frac{t}{4}$
 $t = 128$

7. $-13r = 195$
 $r = -15$

8. $-\frac{f}{2} = 18$
 $f = -36$

9. $8s = 336$
 $s = 42$

10. $\frac{v}{3} = 36$
 $v = 108$

11. $240 = -12n$
 $n = -20$

12. $-\frac{a}{11} = 77$
 $a = -847$

13. $198 = -6z$
 $z = -33$

14. $40 = -\frac{k}{8}$
 $k = -320$

15. $330 = 15b$
 $b = 22$

16. $100 = \frac{e}{10}$
 $e = 1,000$

17. $-8n = 40$
 $n = -5$

18. $21e = 462$
 $e = 22$

19. $-\frac{x}{12} = 72$
 $x = -864$

20. $72 = 12y$
 $y = 6$

SOLVING ONE STEP EQUATIONS PRACTICE - A ANSWERS - PAGE 2

REMEMBER, YOU ARE TRYING TO GET THE VARIABLES AND NUMBERS ON OPPOSITE SIDES OF THE WALL (EQUAL SIGN).

I WANT TO GET AWAY FROM THE z.

1. $15 = \frac{t}{3}$
 $\times 3$
 $15 \cdot 3 = \frac{t}{3} \cdot 3$
 $45 = t$

2. $7z = 77$
 $\div 7$
 $\frac{7z}{7} = \frac{77}{7}$
 $z = 11$

3. $\frac{r}{8} = 9$
 $\times 8$
 $\frac{r}{8} \cdot 8 = 9 \cdot 8$
 $r = 72$

SOLVE EACH EQUATION.

4. $11e = 121$
 $e = 11$

5. $\frac{y}{4} = 14$
 $y = 56$

6. $91 = 7g$
 $g = 13$

7. $12 = \frac{t}{10}$
 $t = 120$

8. $9h = 117$
 $h = 13$

9. $\frac{p}{6} = 8$
 $p = 48$

10. $88 = 4i$
 $i = 22$

11. $303 = \frac{a}{3}$
 $a = 909$

12. $3n = 909$
 $n = 303$

13. $\frac{b}{16} = 8$
 $b = 128$

14. $147 = 7u$
 $u = 21$

15. $18 = \frac{x}{6}$
 $x = 108$

16. $25v = 125$
 $v = 5$

17. $\frac{r}{20} = 4$
 $r = 80$

18. $154 = 11y$
 $y = 14$

19. $21 = \frac{c}{7}$
 $c = 147$

20. $\frac{d}{42} = 6$
 $d = 252$

21. $13y = 169$
 $y = 13$

22. $99 = 3j$
 $j = 33$

23. $8u = 440$
 $u = 55$

24. $522 = \frac{s}{9}$
 $s = 4,698$

SOLVING ONE STEP EQUATIONS PRACTICE - C ANSWERS - PAGE 4

THEY'RE TRYING TO TRICK US ON THESE PROBLEMS.

1. $15 = \frac{1}{3}t$
 $\frac{1}{3}t$ IS THE SAME AS $\frac{t}{3}$
 $\times 3$
 $15 \cdot 3 = \frac{t}{3} \cdot 3$
 $45 = t$

2. $-\frac{1}{3}t = 15$
 $-\frac{1}{3}t$ IS THE SAME AS $-\frac{t}{3}$
 $\times 3$
 $-\frac{t}{3} \cdot 3 = 15 \cdot 3$
 $-t = 45$
 $f = -45$

SOLVE EACH EQUATION.

3. $\frac{1}{7}g = 14$
 $g = 98$

4. $-13u = 234$
 $u = -18$

5. $60 = -\frac{1}{6}f$
 $f = -360$

6. $7s = 126$
 $s = 18$

7. $-\frac{x}{5} = 20$
 $x = -100$

8. $49 = -7p$
 $p = -7$

9. $182 = 13m$
 $m = 14$

10. $36 = -\frac{1}{9}b$
 $b = -324$

11. $-11y = 110$
 $y = -10$

12. $-\frac{1}{2}u = 10$
 $u = -20$

13. $224 = 7e$
 $e = 32$

14. $40 = \frac{c}{5}$
 $c = 200$

15. $-\frac{1}{11}r = 55$
 $r = -605$

16. $28 = -\frac{d}{7}$
 $d = -196$

17. $15y = 120$
 $y = 8$

18. $200 = 25j$
 $j = 8$

19. $30 = -\frac{1}{6}s$
 $s = -180$

20. $-5y = 140$
 $y = -28$