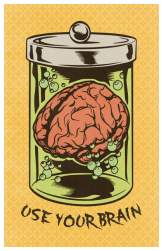
Warm Up Grade 8

April 29, 2019



Solve each equation. Verify the solution.

a) $-2x + 4 = 26$

$-2x + 4 - 4 = 26 - 4$

$-2x = 22$

$\frac{-2x}{-2} = \frac{22}{-2}$

$x = -11$

b) $\frac{a}{3} = 6$

$\frac{a}{3} \times 3 = 6 \times 3$

$a = 18$

c) $-3 = 2x + 15$

$-3 - 15 = 2x + 15 - 15$

$-18 = 2x$

$\frac{-18}{2} = \frac{2x}{2}$

$-9 = x$

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#11

11) a) $-8x+11=59$

$-8x+11-11=59-11$

$-8x=48$

$\frac{-8x}{-8}=\frac{48}{-8}$

$x=-6$

LS
$-8x+11$
$-8x-6+11$
$48+11$
59

RS
59

b) $11c+21=-34$

$11c+21-21=-34-21$ $[-34+(-21)]$

$11c=-55$

$\frac{11c}{11}=\frac{-55}{11}$

$c=-5$

LS
$11c+21$
$11x-5+21$
$-55+21$
-34

RS
-34

c) $23=-5b+3$

$23-3=-5b+3-3$

$20=-5b$

$\frac{20}{5}=\frac{-5b}{5}$

$4=-b$

$-4=b$

LS
23

RS
$-5b+3$
$-5x-4+3$
$20+3$
23

d) $6a - 15 = -45$

$6a - 15 = -45$

$6a - 15 + 15 = -45 + 15$

$6a = -30$

$\frac{6a}{6} = \frac{-30}{6}$

$a = -5$

LS
-45

RS
$6a - 15$
$6 \times (-5) - 15$
$-30 - 15$
-45

e) $52 = 25 - 9f$

$52 - 25 = 25 - 25 - 9f$

$27 = -9f$

$\frac{27}{-9} = \frac{-9f}{-9}$

$-3 = f$

LS
52

RS
$25 - 9f$
$25 - 9(-3)$
$25 - (-27)$
$25 + 27$
52

f) $-13 + 4d = 31$

$-13 + 13 + 4d = 31 + 13$

$4d = 44$

$\frac{4d}{4} = \frac{44}{4}$

$d = 11$

LS
$-13 + 4d$
$-13 + 4 \times 11$
$-13 + 44$
31

RS
31

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12 a) $3n+7=8$

$3n+7-7=8-7$

$3n=1$

$\frac{3n}{3}=\frac{1}{3}$

$n=1/3$ or $0.\overline{3}$

LS	RS
$3n+7$	8
$3\times\frac{1}{3}+7$	
$1+7$	
8	

b) $6x+6=15$

$6x+6-6=15-6$

$6x=9$

$\frac{6x}{6}=\frac{9}{6}$

$x=1.5$

LS	RS
$6x+6$	15
$6\times1.5+6$	
$9+6$	
15	

c) $-23=5p-27$

$-23+27=5p-27+27$

$4=5p$

$\frac{4}{5}=\frac{5p}{5}$

$0.8=p$

LS	RS
-23	$5p-27$
	$5\times(0.8)-27$
	$4-27$
	-23

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d) $5p+6=7$

$5p+6-6=7-6$

$5p=1$

$\frac{5p}{5}=\frac{1}{5}$

$p=0.2$

LS

$5p+6$

$5\times0.2+6$

$1+6$

7

RS

7

e) $8e-9=-3$

$8e-9+9=-3+9$

$8e=6$

$\frac{8e}{8}=\frac{6}{8}$

$e=6/8$ or $3/4$ or 0.75

LS

$8e-9$

$8\times0.75-9$

$6-9$

-3

RS

-3

f) $-17+10g=-9$

$-17+10g+17=-9+17$

$10g=8$

$\frac{10g}{10}=\frac{8}{10}$

$g=\frac{8}{10}$ or $\frac{4}{5}$ or 0.8

LS

$-17+10g$

$-17+10\times0.8$

$-17+8$

-9

RS

-9

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13. n = yesterday's temp.

$2n + 7 = -3$

$2n + 7 - 7 = -3 - 7$ $[-3 + (-7)]$

$2n = -10$

$\frac{2n}{2} = \frac{-10}{2}$

$n = -5$

LS: $2n + 7$, $2(-5) + 7$, $-10 + 7$, -3

RS: -3

Yesterday's temperature was $-5°C$.

Homework Sheet Extra Prac 2 # 1-7

Ex. Prac

1a) $4x = 32$

$\frac{4x}{4} = \frac{32}{4}$

$x = 8$

LS
$4x$
4×8
32

RS
32

b) $-35 = -5x$

$\frac{-35}{-5} = \frac{-5x}{-5}$

$7 = x$

LS
-35

RS
$-5x$
-5×7
-35

c) $-48 = 8x$

$\frac{-48}{8} = \frac{8x}{8}$

$-6 = x$

LS
-48

RS
$8x$
8×-6
-48

d) $9x = 54$

$\frac{9x}{9} = \frac{54}{9}$

$x = 6$

LS
$9x$
9×6
54

RS
54

2a) $-8a+11=27$

$-8a+11-11=27-11$

$-8a=16$

$\frac{-8a}{-8}=\frac{16}{-8}$

$a=-2$

LS

$-8a+11$

$-8(-2)+11$

$16+11$

27

RS

27

b) $12b+21=93$

$12b+21-21=93-21$

$12b=72$

$\frac{12b}{12}=\frac{72}{12}$

$b=6$

LS

$12b+21$

$12\times6+21$

$72+21$

93

RS

93

c) $-42=5c-27$

$-42+27=5c-27+27$

$-15=5c$

$\frac{-15}{5}=\frac{5c}{5}$

$-3=c$

LS

-42

RS

$5c-27$

$5\times-3-27$

$-15-27$

-42

d) $6f-15=-45$

$6f-15+15=-45+15$

$6f=-30$

$\frac{6f}{6}=\frac{-30}{6}$

$f=-5$

LS

$6f-15$

$6\times-5-15$

$-30-15$

-45

RS

-45

3a) $2x-7=9$

$2x-7+7=9+7$

$2x=16$

$\frac{2x}{2}=\frac{16}{2}$

$x=8$

LS
$2x-7$
$2\times8-7$
$16-7$
9

RS
9

b) $-4x+6=-14$

$-4x+6-6=-14-6$

$-4x=-20$

$\frac{-4x}{-4}=\frac{-20}{-4}$

$x=5$

LS
$-4x+6$
$-4\times5+6$
$-20+6$
-14

RS
-14

c) $6x-7=-19$

$6x-7+7=-19+7$

$6x=-12$

$\frac{6x}{6}=\frac{-12}{6}$

$x=-2$

LS
$6x-7$
$6\times-2-7$
$-12-7$
-19

RS
-19

d) $-7x-8=13$

$-7x-8+8=13+8$

$-7x=21$

$\frac{-7x}{-7}=\frac{21}{-7}$

$x=-3$

LS
$-7x-8$
$-7\times-3-8$
$21-8$
13

RS
13

4 a) $2a+3=4$

$2a+3-3=4-3$

$2a=1$

$\frac{2a}{2}=\frac{1}{2}$

$a=\frac{1}{2}$

LS
$2a+3$
$2\times\frac{1}{2}+3$
$1+3$
4

RS
4

b) $15=10+2b$

$15-10=10+2b-10$

$5=2b$

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

$2.5=b$

LS
15

RS
$10+2b$
$10+2\times2.5$
$10+5$
15

c) $3=5c-6$

$3+6=5c-6+6$

$9=5c$

$\frac{9}{5}=\frac{5c}{5}$

$1.8=c$

LS
3

RS
$5c-6$
$5\times1.8-6$
$9-6$
3

d) $9f-7=1$

$9f-7+7=1+7$

$9f=8$

$\frac{9f}{9}=\frac{8}{9}$

$f=0.\overline{8}$

LS
$9f-7$
$9\times\frac{8}{9}-7$
$8-7$
1

RS
1

$\frac{9}{1}\times\frac{8}{9}=\frac{72}{9}$
$=8$

5a) n = the number

$2n + 5 = 17$

$2n + 5 - 5 = 17 - 5$

$2n = 12$

$\frac{2n}{2} = \frac{12}{2}$

$n = 6$

The number is 6.

LS	RS
$2n+5$	17
$2\times6+5$	
$12+5$	
17	

b) n = the number

$5n - 6 = 29$

$5n - 6 + 6 = 29 + 6$

$5n = 35$

$\frac{5n}{5} = \frac{35}{5}$

$n = 7$

The number is 7.

LS	RS
$5n-6$	29
$5\times7-6$	
$35-6$	
29	

6. a = number of students who attended

$13a + 125 = 944$

$13a + 125 - 125 = 944 - 125$

$13a = 819$

$\frac{13a}{13} = \frac{819}{13}$

$a = 63$

LS: $13a + 125$

$13 \times 63 + 125$

$819 + 125$

944

RS: 944

63 students attended

7. If it cost $225 for the class to go skating and they have to pay $150 for ice rental and $3 for skate rental, how many students skated?

s = # who skated

$3s + 150 = 225$

$3s + 150 - 150 = 225 - 150$

$3s = 75$

$\frac{3s}{3} = \frac{75}{3}$

$s = 25$

25 students skated.

a) Which number could you multiply $\frac{5}{9}$ by to get the product 5?

$\frac{5}{9} \times \boxed{\frac{9}{1}} = \frac{5}{1} = \frac{10}{2} = \frac{15}{3} = \frac{20}{4} = \frac{25}{5} = \frac{30}{6} = \frac{35}{7} = \frac{40}{8} = \frac{45}{9}$

$\frac{5}{9} \times \frac{9}{1} = \frac{45}{9} = 5$

b) Which number could you multiply $\frac{4}{7}$ by to get the product 4?

$\frac{4}{7} \times \boxed{7} = 4$

$\frac{28}{7} = 4$

$\frac{a}{3} = ? \times 3$

$a = 3?$

$\frac{6}{2}$

key word for ÷

Sarah shares a bag of candy with her friend Emma so that each of them get 15 candy. How much candy did the bag contain?

a)Write an equation that you can use to solve the problem

let b represent the number of candy in the bag originally

$$\frac{b}{2} = 15$$

b) solve

$$2 \times \frac{b}{2} = 15 \times 2$$

$$b = 30$$

c) verify

Example 1)

Grandma has enough money to give the same amount to her five grandchildren.
After Grandma gives them the money, each grandchild has $25 . How much money did Grandma have to start?
a) Write an equation to represent this problem.
b) Solve the equation.
c) Verify the solution.

a) let m represent the money Grandma has

$$\frac{m}{5} = 25$$

b)

$$\frac{m}{5} \times 5 = 25 \times 5$$

$$m = 125$$

So grandma had $125

Example 2)

The school's student council sold T-shirts for charity. The council bought the T-shirts in boxes of 40. The student council added $6 to the cost of each T-shirt. Each T-shirt sold for $26. What did the student council pay for 1 box of T-shirts?

a) Write an equation to represent this problem then solve the equation.

let c represent cost of 1 box of t-shirt

$\frac{c}{40} + 6 = \$26$

B) Verify the solution

$\frac{c}{40} + 6 - 6 = 26 - 6$

$\frac{c}{40} = \$20$ ← cost of 1 t-shirt from box

$40 \times \frac{c}{40} = \$20 \times 40$

$c = \$800$

The box of t-shirst is bought for $800

Example 2)

The school's student council sold T-shirts for charity. The council bought the T-shirts in boxes of 40. The student council added $6 to the cost of each T-shirt. Each T-shirt sold for $26. What did the student council pay for 1 box of T-shirts?

c = cost for 1 box

$$\frac{c}{40} + 6 = 26$$

$$\frac{c}{40} + 6 - 6 = 26 - 6$$

$$\frac{c}{40} = 20$$

$$\frac{c}{40} \times \frac{40}{1} = 20 \times 40$$

$$c = 800$$

Student council paid $800 per box

LS

$$\frac{c}{40} + 6$$

$$\frac{800}{40} + 6$$

$$20 + 6$$

$$26$$

RS

$$26$$

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#3(ac), #4(a,c), #5, #6, #7

Brayden is . . .