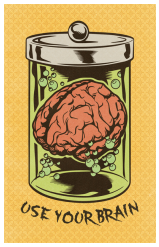
Warm Up Grade 8

April 19, 2017



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

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

$a = 18$

c) $-3 = 2x + 15$

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

$-18 = 2x$

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

$-9 = x$

LHS

$x = -11$

$-2x + 4$

$-2(-11) + 4$

$22 + 4$

26

RHS

26

same

page 332

#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

11) $6a - 15 = -45$

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

$6a = -30$

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

$a = -5$

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

page 332 #12

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
$6 \times 1.5 + 6$	
$9 + 6$	
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

Page 332 #12

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

page 332

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	RS
$2n + 7$	-3
$2(-5) + 7$	
$-10 + 7$	
-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

$6x-7$

$6x-2-7$

$-12-7$

-19

RS

-19

d) $-7x-8=13$

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

$-7x=21$

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

$x=-3$

LS

$-7x-8$

$-7x-3-8$

$21-8$

13

RS

13

4 a) $2a+3=4$

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

$2a=1$

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

$a=1/2$

LS
$2a+3$
$2\times 1/2+3$
$1+3$
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
$10+2b$
$10+2\times 2.5$
$10+5$
15

c) $3=5c-6$

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

$9=5c$

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

$1.8=c$

LS
3

RS
$5c-6$
$5\times 1.8-6$
$9-6$
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
$2n+5$
$2\times6+5$
$12+5$
17

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

RS
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?

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

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

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

$\frac{4}{7} \times \frac{7}{1} = 4$

$\frac{4}{7} \times \frac{\square}{\square} = \frac{4}{1} \quad = \frac{7 \times \square}{4 \times \square}$

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?

Total candy = T

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

let t represent the number of candy in the bag originally

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

b) solve

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

$2 \cdot \frac{t}{2} = 15 \cdot 2$

$t = 30$

c) verify

$t = 30$

LH

$\frac{t}{2}$

$\frac{30}{2}$

15

RH

15

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 G represent Grandma's money

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

b) $5 \times \frac{G}{5} = 25 \times 5$

$G = \$125$

Grandma had $125 to split amongst her 5 grandkids.

c) $G = 125$

LHS RHS

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

$\frac{G}{5}$

$= \frac{125}{5}$

$= 25$ Same

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

$$26$$

Class/Homework

Quiz Tomorrow Similar to warm up from today

pg. 336

#3(ac), #4(a,c), #5 ab, #6 a, #7 abcd /11

Test April 27 (Thursday)

SAM DAB

7a) $\frac{n}{4} + 3 = 10$

$\frac{n}{4} + 3 - 3 = 10 - 3$

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

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

$n = 28$

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

$6 \times \frac{b}{6} = 3 \cdot 6$

$b = 18$