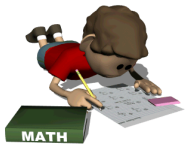
Warm Up Grade 7



Key words:
For each, for every, / , per
This # goes with variable

1) The social group at the school held a banquet . The group was charged $110 for the rental of the hall, plus $9 for each lunch served. The total bill was $812.

How many people attended the luncheon?

a) Write an equation you could use to solve the problem.

b) Solve your equation.

(c) Verify the solution.

Let $x \equiv$ # of people who attended the luncheon.

$$9x + 110 = 812$$

$$9x + 110 - 110 = 812 - 110$$

$$9x = 702$$

$$\frac{9x}{9} = \frac{702}{9}$$

$$\boxed{x = 78}$$

78 people attended the luncheon.

c) Verify

LHS: $9x + 110$

$9(78) + 110$

$702 + 110$

812

RH: 812

same ✓

Extra Prac 5

1 a) $\frac{x}{7} = 4$

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

$x = 28$

LS: $\frac{x}{7}$, $\frac{28}{7}$, 4 RS: 4

b) $\frac{x}{5} = 5$

$\frac{x}{5} \times 5 = 5 \times 5$

$x = 25$

LS: $\frac{x}{5}$, $\frac{25}{5}$, 5 RS: 5

c) $\frac{x}{12} = 1$

$\frac{x}{12} \times 12 = 1 \times 12$

$x = 12$

LS: $\frac{x}{12}$, $\frac{12}{12}$, 1 RS: 1

2 a)

$x + 11 = 23$

$x + 11 - 11 = 23 - 11$

$x = 12$

LS: $x+11$, $12+11$, 23 RS: 23

b) $x - 9 = 17$

$x - 9 + 9 = 17 + 9$

$x = 26$

LS: $x-9$, $26-9$, 17 RS: 17

c) $7x = 77$

$\frac{7x}{7} = \frac{77}{7}$

$x = 11$

LS: $7x$, 7×11, 77 RS: 77

d) $\frac{x}{5} = 8$

$\frac{x}{5} \times 5 = 8 \times 5$

$x = 40$

LS: $\frac{x}{5}$, $\frac{40}{5}$, 8 RS: 8

e) $2x + 13 = 31$

$2x + 13 - 13 = 31 - 13$

$2x = 18$

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

$x = 9$

LS: $2x+13$, $2 \times 9 + 13$, $18 + 13$, 31 RS: 31

f) $3x - 5 = 16$

$3x - 5 + 5 = 16 + 5$

$3x = 21$

$\frac{3x}{3} = \frac{21}{3}$

$x = 7$

LS: $3x-5$, $3 \times 7 - 5$, $21 - 5$, 16 RS: 16

3. m = number of people

$14m + 120 = 610$

$14m + 120 - 120 = 610 - 120$

$14m = 490$

$\frac{14m}{14} = \frac{490}{14}$

$m = 35$

LS	RS
$14m + 120$	610
$14 \times 35 + 120$	
$490 + 120$	
610	

35 people attended the banquet.

4. n = number of friends who got cookies

$4n + 5 = 33$

$4n + 5 - 5 = 33 - 5$

$4n = 28$

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

$n = 7$

LS	RS
$4n + 5$	33
$4 \times 7 + 5$	
$28 + 5$	
33	

7 friends got cookies.

5 a) g = number of students in each group.

$8g + 6 = 38$

$8g + 6 - 6 = 38 - 6$

$8g = 32$

$\frac{8g}{8} = \frac{32}{8}$

$g = 4$

LS	RS
$8g + 6$	38
$8 \times 4 + 6$	
$32 + 6$	
38	

Each group had 4 students.

b) g = # in each group

$5g + 3 = 38$

$5g + 3 - 3 = 38 - 3$

$5g = 35$

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

$g = 7$

LS	RS
$5g + 3$	38
$5 \times 7 + 3$	
$35 + 3$	
38	

Each group had 7 students

6a) b = number of 10 kg bags.

sales of 10kg bags + 5 kg bags = 202

$14b + 48 = 202$

$14b + 48 - 48 = 202 - 48$

$14b = 154$

$\frac{14b}{14} = \frac{154}{14}$

$b = 11$

She sold 11 → 10kg bags.

LS	RS
$14b+48$	202
$14\times11+48$	
$154+48$	
202	

b) d = # of 5 kg bags

$8d + 5\times14 = 206$

$8d + 70 = 206$

$8d + 70 - 70 = 206 - 70$

$8d = 136$

$\frac{8d}{8} = \frac{136}{8}$

$d = 17$

She sold 17 5kg bags.

LS	RS
$8d+70$	206
$8\times17+70$	
$136+70$	
206	

7. n = the number

a) $3n+1=28$

$3n+1-1=28-1$

$3n=27$

$\frac{3n}{3}=\frac{27}{3}$

$n=9$

LS: $3n+1$, $3(9)+1$, $27+1$, 28

RS: 28

b) $5n-4=31$

$5n-4+4=31+4$

$5n=35$

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

$n=7$

LS: $5n-4$, $5\times7-4$, $35-4$, 31

RS: 31

c) $2n+7=29$

$2n+7-7=29-7$

$2n=22$

$\frac{2n}{2}=\frac{22}{2}$

$n=11$

LS: $2n+7$, $2\times11+7$, $22+7$, 29

RS: 29

d) $3x+17=53$

$3x+17-17=53-17$

$3x=36$

$\frac{3x}{3}=\frac{36}{3}$

$x=12$

LS: $3x+17$, $3\times12+17$, $36+17$, 53

RS: 53

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1. $8 + x = 21$

$8 + x - 8 = 21 - 8$

$x = 13$

Jan started with 13 stamps.

2. n = the number

a) $n + 5 = 22$

$n = 17$

b) $n - 7 = 31$

$n = 38$

c) $6n = 54$

$n = 9$

d) $\frac{n}{8} = 9$

$n = 72$

e) $9 + 3n = 24$

$9 + 15 = 24$

$n = 5$

3a) x = the money he had

$x - 36 = 45$

① $x = 76$

$76 - 36$

40

② $x = 81$

$81 - 36$

45

b) x = price of each book

$13x = 208$

① $n = 11$ $13x$, 13×11, 143

② $n = 15$ $13x$, 13×15, 195

$n = 16$ $13x$, 13×16, 208

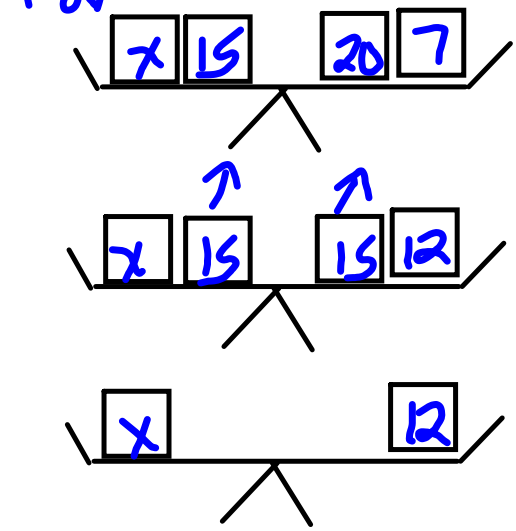
c) m = # of dominoes he had

$\frac{m}{15} = 17$

① $m = 250$ $\frac{m}{15}$, $\frac{250}{15}$, $= 16.7$

② $m = 255$ $\frac{m}{15}$, $\frac{255}{15}$, $= 17$

4 a)

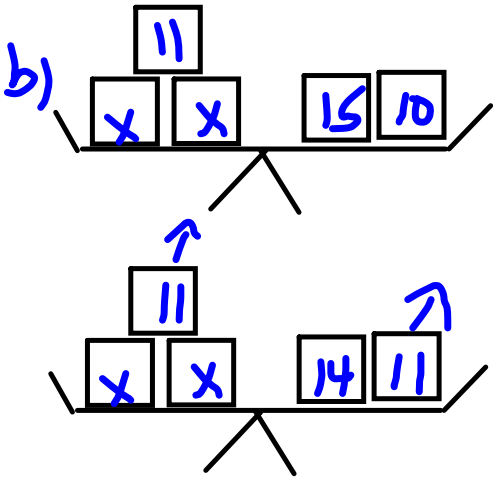


$x + 15 = 27$

$x + 15 - 15 = 27 - 15$

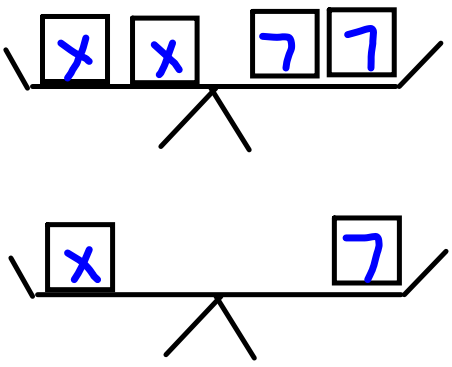
$x = 12$

b)



$2x + 11 = 25$

$2x + 11 - 11 = 25 - 11$



$2x = 14$

$\frac{2x}{2} = \frac{14}{2}$

$x = 7$

Class / Homework

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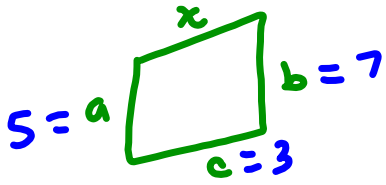

Test on Unit 6 Tomorrow

$P = s + s + s + s$

$21 = 5 + 3 + 7 + x$

$21 = 15 + x$

Test Outline

8 MC

6 Long response

#1 (Solve by inspection)

#2(Solve by showing your work using algebra) (a to e)

#3 (Word Problem - Write equation and solve)

#4(Word Problem - Write equation, solve & Verify)

#5(Word Problem - Write equation, solve & Verify)

#6 (Area and perimeter question with formulas given just have to fill in given information and solve)