



Warm Up Grade 7



Use mental math

1) $\$70 - \65.41

$$\begin{aligned} 70 - 65 &= 5 - 0.40 \\ &= 4.60 \\ &\quad - 0.01 \\ &\hline &= \boxed{\$4.59} \end{aligned}$$

Solve using algebra

1) $4x - 3 = 25$

$$\begin{aligned} 4x - 3 &= 25 \\ 4x - 3 + 3 &= 25 + 3 \\ 4x &= 28 \\ \div 4 &\quad \div 4 \\ \boxed{x = 7} \end{aligned}$$

2) 15% of 140

$$\begin{aligned} 10\% \text{ of } 140 &= 14 \\ \downarrow \text{like } \div 10 & \\ \div 2 & \quad \downarrow \div 2 \\ 5\% \text{ of } 140 &= 7 \end{aligned}$$

$15\% = 10\% + 5\%$

$$\begin{aligned} &14 + 7 \\ \boxed{15\% \text{ of } 140 = 21} \end{aligned}$$

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1 a) i) $h =$ distance hiked day 2

$$5 + h = 12$$

$$h = 7$$

ii) $d =$ distanced hiked each day (3,4)

$$d + d = 12$$

$$2d = 12$$

$$d = 6$$

b) i) $s =$ squirrels on day 4

$$67 + s = 92$$

$$s = 20 \quad \begin{array}{r} 67 + s \\ 67 + 20 \\ \hline 87 \end{array}$$

$$s = 25 \quad \begin{array}{r} 67 + s \\ 67 + 25 \\ \hline 92 \end{array}$$

ii) $c =$ water on each day (3 days)

$$3c + 8 = 29$$

$$c = 8 \quad \begin{array}{r} 3c + 8 \\ 3 \times 8 + 8 \\ 24 + 8 \\ \hline 32 \end{array}$$

$$c = 6 \quad \begin{array}{r} 3c + 8 \\ 3 \times 6 + 8 \\ 18 + 8 \\ \hline 26 \end{array}$$

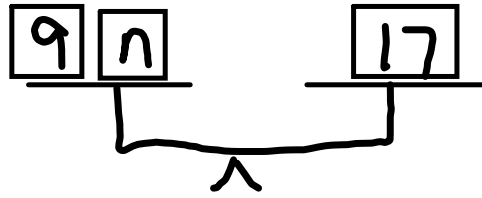
$$c = 7 \quad \begin{array}{r} 3c + 8 \\ 3 \times 7 + 8 \\ 21 + 8 \\ \hline 29 \end{array}$$

$n =$ the number

$$2 \text{ i) } 9 + n = 17$$

$$9 + n - 9 = 17 - 9$$

$$n = 8$$

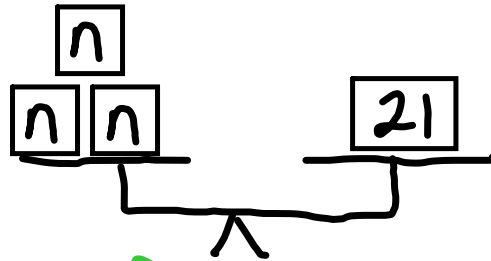


verify
 Ls
 $9 + n$
 $9 + 8$
 17
 Rs
 17

$$ii) 3n = 21$$

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

$$n = 7$$



verify
 Ls
 $3n$
 3×7
 21
 Rs
 21

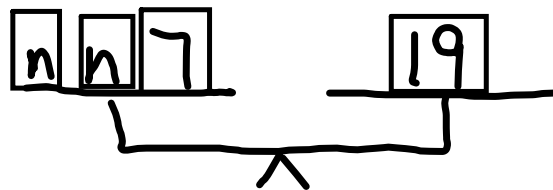
$$iii) 2n + 7 = 19$$

$$2n + 7 - 7 = 19 - 7$$

$$2n = 12$$

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

$$n = 6$$



3. $b = \text{Bill's age}$

$$2b + 14 = 40$$

$$2b + 14 - 14 = 40 - 14$$

$$2b = 26$$

$$\frac{2b}{2} = \frac{26}{2}$$

Bill is 13 yrs old $b = 13$

$$\begin{array}{r} 25 + 14 \\ 2 \times 13 + 14 \\ 26 + 14 \\ 40 \end{array}$$

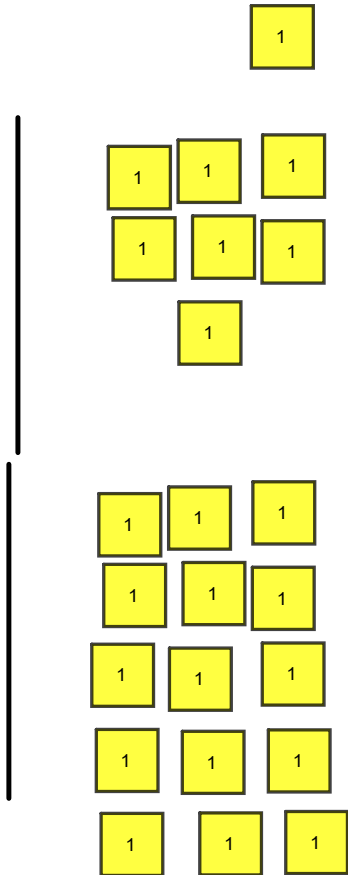
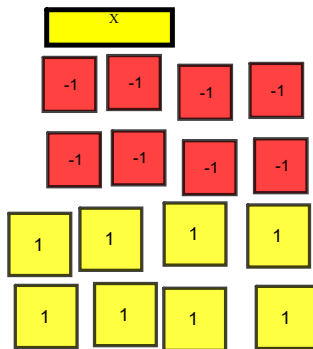
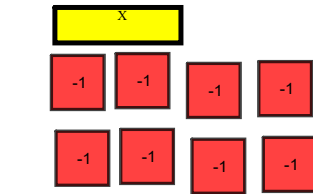
$$\begin{array}{r} RS \\ 40 \end{array}$$

4. $y = \text{Swanna's age}$

$$y - 8 = 7$$

$$y - 8 + 8 = 7 + 8$$

$$y = 15$$



i) $j = \text{original temp.}$

$$j - 6 = -4$$

$$\boxed{x}$$

$$\begin{array}{ccc} -1 & -1 & -1 \\ -1 & -1 & -1 \end{array}$$

$$\boxed{x}$$

$$\begin{array}{ccc} -1 & -1 & -1 \\ -1 & -1 & -1 \end{array}$$

$$\begin{array}{ccc} 1 & 1 & 1 \end{array}$$

$$\begin{array}{ccc} 1 & 1 & 1 \end{array}$$

$$\begin{array}{cc} -1 & -1 \\ -1 & -1 \end{array}$$

$$\begin{array}{cc} -1 & -1 \\ -1 & -1 \end{array}$$

$$\begin{array}{ccc} 1 & 1 & 1 \end{array}$$

$$\begin{array}{ccc} 1 & 1 & 1 \end{array}$$

$$j = +2$$

$$\boxed{x}$$

$$1$$

$$1$$

ii) $x = \text{money borrowed}$

$$x - 7 = 5$$

$$x - 7 + 7 = 5 + 7$$

$$x = 12$$

She borrowed \$12.

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1a) $x - 27 = 35$

$$x - 27 + 27 = 35 + 27$$

$$x = 62$$

LS	Ver.	RS
$x - 27$		35
$62 - 27$		
35		

b) $11x = 132$

$$\frac{11x}{11} = \frac{132}{11}$$

$$x = 12$$

LS	Ver.	RS
$11x$		132
11×12		
132		

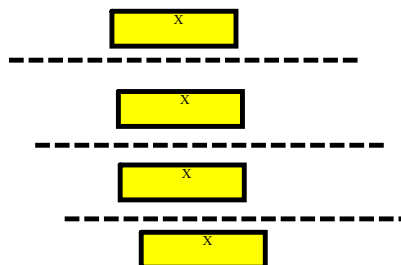
c) $4x + 7 = 75$

$$4x + 7 - 7 = 75 - 7$$

$$4x = 68$$

$$\frac{4x}{4} = \frac{68}{4}$$

$$x = 17$$



LS	Ver.	RS
$4x + 7$		75
$4 \times 17 + 7$		
$68 + 7$		
75		

Homework pg. 239 # 4-7 (2,3 if they were not finished last night)
Sheet Ex Prac 4 # 1-3

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2 $m =$ the number

a) $m + 19 = 42$

$m + 19 - 19 = 42 - 19$

$m = 23$

Ls verify
 $m + 19$
 $23 + 19$
 42

Rs
 42

b) $3m + 10 = 25$

$3m + 10 - 10 = 25 - 10$

$3m = 15$

$\frac{3m}{3} = \frac{15}{3}$

$m = 5$

Ls verify
 $3m + 10$
 $3 \times 5 + 10$
 $15 + 10$
 25

Rs
 25

c) $4m + 15 = 63$

$4m + 15 - 15 = 63 - 15$

$4m = 48$

$\frac{4m}{4} = \frac{48}{4}$

$m = 12$

Ls verify
 $4m + 15$
 $4 \times 12 + 15$
 $48 + 15$
 63

Rs
 63

3. $a =$ Jari's age now

$2a + 5 = 27$

$2a + 5 - 5 = 27 - 5$

$2a = 22$

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

$a = 11$

Ls verify
 $2a + 5$
 $2 \times 11 + 5$
 $22 + 5$
 27

Rs
 27

Jari is now 11.



Solving Division Type Equations

To isolate the variable and solve the equation, we use opposite operations:



Addition	opposite	→	Subtraction
Subtraction	opposite	→	Addition
Multiplication	opposite	→	Division
Division	opposite	→	Multiplication

Remember whatever you do to one side of the equation you MUST do the other side.

$$1) \frac{m}{2} = 7$$

$$\cancel{2} \times \frac{m}{\cancel{2}} = 7 \times 2$$

$$m = 14$$

$$2) \frac{c}{5} = 10$$

$$\cancel{5} \times \frac{c}{\cancel{5}} = 10 \times 5$$

$$c = 50$$

$$3) \frac{m}{4} + 8 = 1$$

$$\frac{m}{4} + \cancel{8} - 8 = 1 - 8$$

$$\frac{m}{4} = (-7)$$

$$\cancel{4} \times \frac{m}{\cancel{4}} = (-7) \times 4$$

$$m = -28$$

Class / Homework

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4 to #7

Extra Practice Sheet 4



1 & # 2

Attachments

Extra Practice 4 Solving Equations byusin algebra pdf.pdf