Warm Up Grade 7

Use mental math
1) $70 - $65.41

$$70 - 65 = 5.00$$
$$- .40$$
$$\$4.60$$
$$\$4.59 - 1¢$$

2) 15% of 140 ~~(crossed out)~~

Solve using algebra

1) 4x - 3 = 25

$$4x - 3^{+3} = 25^{+3}$$

$$4x = 28$$
$$\div 4 \qquad \div 4$$

$$x = 7$$

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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)

$$d + d = 12 \qquad 2d = 12$$

$$d = 6$$

b) i) s = squirrels on day 4

$$67 + s = 92$$

$s = 20$, $67 + s$
$\qquad\quad 67 + 20$
$\qquad\qquad 87$

$\boxed{s = 25}$ $\quad 67 + s$
$\qquad\qquad 67 + 25$
$\qquad\qquad\quad 92$

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

$$3c + 8 = 29$$

$c = 8$, $3c + 8$
$\qquad\quad 3 \times 8 + 8$
$\qquad\qquad 24 + 8$
$\qquad\qquad\quad 32$

$c = 6 \quad 3c + 8$
$\qquad\quad 3 \times 6 + 8$
$\qquad\quad 18 + 8$
$\qquad\qquad 26$

$\boxed{c = 7}$ $3c + 8$
$\qquad\quad 3 \times 7 + 8$
$\qquad\quad 21 + 8$
$\qquad\qquad 29$

$n -$ the number

2 i) $9 + n = 17$

$9 + n - 9 = 17 - 9$

$n = 8$

verify

LS

$9 + n$
$9 + 9$
17

RS

17

(ii) $3n = 21$

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

$n = 7$

LS verify RS

$3n$
3×7
21

21
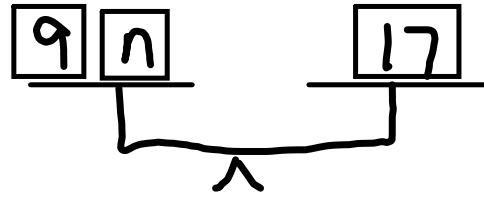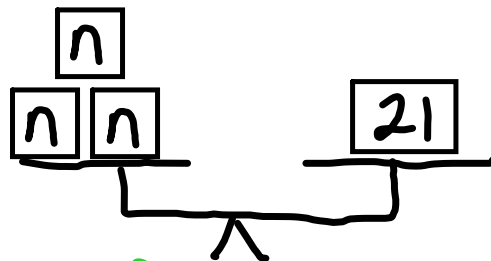
(iii) $2n + 7 = 19$

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

$2n = 12$

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

$n = 6$
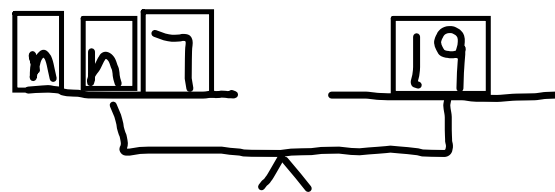
3. b = Bill's age

$2b + 14 = 40$

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

$2b = 26$

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

$b = 13$

Bill is 13 yrs old

$\overset{LS}{25 + 14}$ $\overset{RS}{40}$

$2 \times 13 + 14$

$26 + 14$

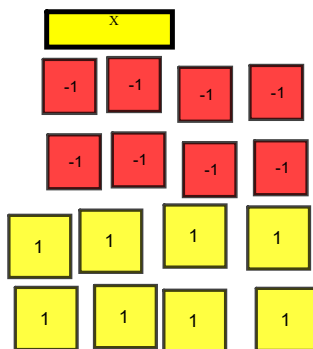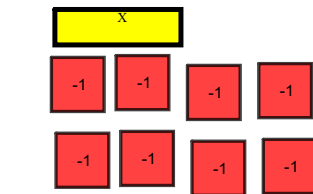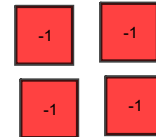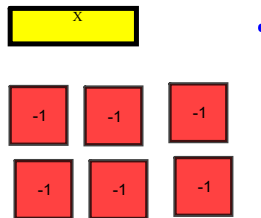40

4 i) y = Swanna's age

$y - 8 = 7$

$y - 8 + 8 = 7 + 8$

$y = 15$
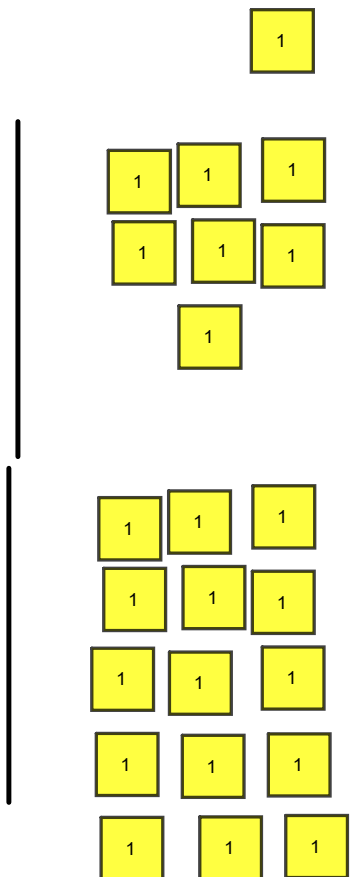
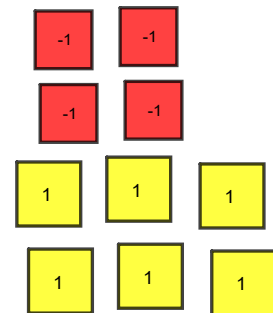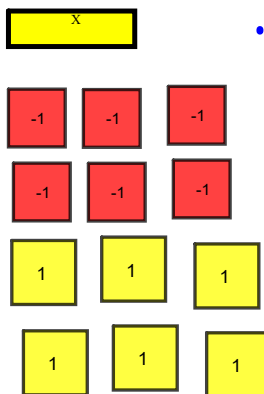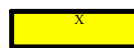ii) j = original temp.

$$j - 6 = -4$$

$$j - 6 + 6 = -4 + 6$$

$$j = +2$$

iii) x = 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
                              35
$x - 27$
$62 - 27$
35

b) $11x = 132$

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

$x = 12$

LS   ver   RS
                     132
$11x$
11×12
132
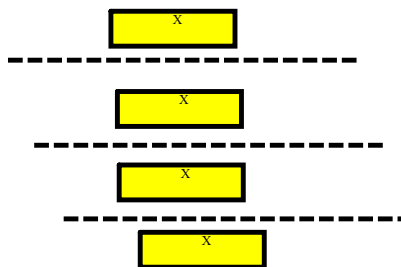
c) $4x + 7 = 75$

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

$4x = 68$

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

$x = 17$

LS   ver   RS
                     75
$4x + 7$
$4 \times 17 + 7$
$68 + 7$
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   RS
m+19   42
23+19
42

b) $3m + 10 = 25$

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

$3m = 15$

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

$m = 5$

LS   verify   RS
3m+10   25
3×5+10
15+10
25

c) $4m + 15 = 63$

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

$4m = 48$

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

$m = 12$

LS   verify   RS
4m+15   63
4×12+15
48+15
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   RS
2a+5   27
2×11+5
22+5
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!

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

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

$$\dfrac{m}{2}^{\times 2} = 7^{\times 2}$$

$$m = 14$$

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

$$\dfrac{c}{5} \cdot 5 = 10 \cdot 5$$

$$c = 50$$

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

$$\dfrac{m}{4} + 8 - 8 = 1 - 8$$

$$\dfrac{m}{4} = -7$$

$$\dfrac{m}{4} \cdot 4 = (-7) \cdot 4$$

$$m = (-28)$$

$$2x + 3 \qquad x = 4$$

$$2(4) + 3$$
$$8 + 3$$
$$11$$

BADMAS

$$4x - 7 \overset{+7}{=} 13^{+7}$$

$$4x = 20$$
$$\div 4 \qquad \div 4$$

$$\boxed{x = 5}$$

SAMDAB

Class / Homework

Page 239

4 to #7

Extra Practice Sheet 4

1 & # 2

Key words

per
/
for every
each

goes
with
letter

$6/h$ means
$6x$

Attachments

Extra Practice 4 Solving Equations byusin algebra pdf.pdf