14. EQUATIONS

Practice 1 slide 2
Solve the following equations mentally. Check your answers.

a $3x + 7 = 19$ b $2x + 11 = 21$ c $3x + 5 = 29$ d $7x + 10 = 31$
e $4x – 5 = 7$ f $3x – 8 = 10$ g $5x – 21 = 4$ h $2x – 5 = 6$
i $\frac{x}{3} + 4 = 6$ j $\frac{x}{4} + 7 = 9$ k $\frac{x}{2} – 8 = 2$ l $\frac{x}{3} – 1 = 6$
m $\frac{2x}{3} + 4 = 8$ n $\frac{3x}{5} – 4 = 5$ o $\frac{7x}{2} – 10 = 11$ p $\frac{3x}{8} + 17 = 20$

Practice 2 slide 3
Solve the following equations mentally.
a $7x – 5 = 4x + 10$ b $5 + 4x = 13 + 2x$ c $7x + 3 = 15 + x$ d $5x – 21 = x – 1$
e $6x + 1 = 4x – 3$ f $5x – 1 = 3x + 9$ g $8x – 9 = 5x + 12$ h $8x – 2 = 6x – 23$

Practice 3 slide 5
Solve the following equations mentally.
a $3x + 5y = 19$, $2x + 3y = 12$ b $2x + 3y = 14$, $5x + 7y = 33$ c $2x + 5y = 19$, $3x + 2y = 12$ d $3x + 2y = 5$, $7x + 3y = 10$

Practice 4 slide 6
Solve:
a $4x – 3y = 18$, $3x – 4y = 10$ b $7x – 4y = 48$, $4x – 7y = 18$ c $6x – 5y = 27$, $5x – 6y = 17$ d $9x – 4y = 88$, $4x – 9y = 3$

Practice 5 slide 7
Solve:
a $3x + 2y = 6$, $2x + 3y = 9$ b $3x + 8y = 6$, $5x + 3y = 10$ c $4x – y = 20$, $x + 5y = 5$ d $13x + 17y = 2$, $9x + 51y = 6$

Practice 6, slides 8 - 12
Solve:
1) $3x + 4x = 5x + 6x$
2) $3x + 3 = x + 1$
3) $2x – 1 = 4x – 2$
4) $(x + 9)(x + 2) = (x – 3)(x – 6)$
5) $\frac{2}{x+3} + \frac{2}{x+5} = 0$
6) $\frac{3}{x-4} – \frac{3}{6-x} = 0$

7) $\frac{x+3}{x+4} = \frac{2x+5}{2x+4}$

8) $\frac{x+2}{x+3} = \frac{2x+1}{2x}$

9) $\frac{1}{x+3} + \frac{1}{x+7} = \frac{1}{x+1} + \frac{1}{x+9}$

10) $\frac{3x}{x-4} + \frac{3x}{x+2} = \frac{3x}{x+1} + \frac{3x}{x-3}$

Practice 7 slide 13
Solve:
a $2x^2 + x - 6 = 0$ b $x^2 - 2x - 4 = 0$ c $x^2 + 5x - 2 = 0$ d $2x^2 + 8x + 1 = 0$

ANSWERS
LESSON 14

Pr 1

a 4	b 5	c 8	d 3
e 3	f 6	g 5	h 5.5
i 6	j 8	k 20	l 21
m 6	n 15	o 6	p 8

Pr 2

a 5	b 4	c 2	d 5
e –2	f 5	g 7	h –10.5

Pr 3
a 3, 2 b 1, 4 c 2, 3 d 1, 1

Pr 4
a 6, 2 b 8, 2 c 7, 3 d 12, 5

Pr 5
a x=0, y=3 b x=2, y=0 c x=5, y=0 d x=0, y=$\frac{2}{17}$

Pr 6

1) 0	2) -1	3) ½	4) 0
5) -4	6) 5	7) -8/3	8) -1
9) -5	10) 0, 1		

Pr 7
a x=$\frac{3}{2}$, –2 b x=$\frac{1}{2}\left(\pm\sqrt{20}+2\right)$ c x=$\frac{1}{2}\left(\pm\sqrt{33}-5\right)$ d x=$\frac{1}{4}\left(\pm\sqrt{56}-8\right)$