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 $\dfrac{x}{3} + 4 = 6$ j $\dfrac{x}{4} + 7 = 9$ k $\dfrac{x}{2} - 8 = 2$ l $\dfrac{x}{3} - 1 = 6$

m $\dfrac{2x}{3} + 4 = 8$ n $\dfrac{3x}{5} - 4 = 5$ o $\dfrac{7x}{2} - 10 = 11$ p $\dfrac{3x}{8} + 17 = 20$

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 $3x + 5y = 19$ b $2x + 3y = 14$ c $2x + 5y = 19$ d $3x + 2y = 5$
   $2x + 3y = 12$ $5x + 7y = 33$ $3x + 2y = 12$ $7x + 3y = 10$

Practice 4 slide 6

Solve:

a $4x - 3y = 18$ b $7x - 4y = 48$ c $6x - 5y = 27$ d $9x - 4y = 88$
   $3x - 4y = 10$ $4x - 7y = 18$ $5x - 6y = 17$ $4x - 9y = 3$

Practice 5 slide 7

Solve:

a $3x + 2y = 6$ b $3x + 8y = 6$ c $4x - y = 20$ d $13x + 17y = 2$
   $2x + 3y = 9$ $5x + 3y = 10$ $x + 5y = 5$ $9x + 51y = 6$

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) $\dfrac{2}{x+3} + \dfrac{2}{x+5} = 0$ 6) $\dfrac{3}{x-4} - \dfrac{3}{6-x} = 0$

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=$\frac{1}{4}\left(\pm\sqrt{56}-8\right)$