

## 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  $3x + 5y = 19$

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)  $\frac{2}{x+3} + \frac{2}{x+5} = 0$

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:

$$a \quad 2x^2 + x - 6 = 0$$

$$b \quad x^2 - 2x - 4 = 0$$

$$c \quad x^2 + 5x - 2 = 0$$

$$d \quad 2x^2 + 8x + 1 = 0$$

### 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
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Pr 4

a 3, 2	b 1, 4	c 2, 3	d 1, 1
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Pr 5

a $x=0, y=3$	b $x=2, y=0$	c $x=5, y=0$	d $x=0, y=\frac{2}{17}$
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Pr 6

1) 0	2) -1	3) $\frac{1}{2}$	4) 0
5) -4	6) 5	7) $-\frac{8}{3}$	8) -1
9) -5	10) 0, 1		

Pr 7

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