Term 2 – Year 7 – Homework – Week 3 Name: _____

All lessons

1. Solve each equation algebraically.

a) $x + 5 = 12$	b) $x - 4 = 10$	c) $3x = 15$
d) $\frac{x}{2} = 6$	e) $x - 7 = 2$	f) $5x = 20$

2. Use inverse operations to solve.

a) $2x + 3 = 11$	b) $4x - 2 = 14$	c) $\frac{x}{2} + 1 = 5$
d) $3x - 5 = 10$	e) $5x + 4 = 24$	f) $\frac{x}{3} - 2 = 1$

3. Check if the value of x satisfies the equation.

a) $x = 3$ $2x + 1 = 7$	b) $x = 5$ $4x - 2 = 18$	c) $x = 6$ $\frac{x}{2} + 2 = 5$
d) $x = 4$ $3x - 1 = 11$	e) $x = 7$ $x - 5 = 2$	f) x=2 $5x + 1 = 11$

4. Represent the worded problems mathematically and then solve for the unknown. (Remember to define your term e.g.: let the number be n.)

a) A number plus 4 equals 10	b) Double a number equals 18	c) Subtract 6 from a number to get 9
d) Triple a number, subtract 5, get 10	e) Half a number plus 1 equals 7	f) Four times a number equals 32

5. Solve practical problems using algebra. Use the worded scenarios to create an equation and then solve for the unknown to answer the question.

a) Sam has \$5 more than Alex. Together they have \$25. How much does Alex have?

Thinking

a + s = 25
s = a + 5
a + a + 5 = 25
2a + 5 = 25
2a = 25 -5
a = 20/2

Equation to solve:

2a + 5 = 25

Solution

a = \$10

b) A movie ticket costs \$12. How many tickets can be bought for \$60?

Thinking

Equation to solve:

Solution

c) A number is tripled and then increased by 2. The result is 17.

Thinking

Equation to solve:

Solution

d) A rectangular garden has a perimeter of 24 m. Its length is 7 m. What is the width?

Thinking

Equation to solve:

Solution

e) f 4 pencils cost \$8, how much does 1 pencil cost?

Thinking

Equation to solve:

Solution

f) Taylor is 3 years older than Mia. Together they are 21 years old. Determine their ages.

Thinking

Equation to solve:

Solution