

Algebra Word Problems

Lesson 5

Worksheet 5

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Involving

Age

Algebra Word Problems – Lesson 5 - Worksheet 5 - Algebra Word Problems
Involving Age

Problem 1) Alex is fourteen years old and he is also nine years older than his sister Kristen. How old is Kristen?

Problem 2) Joe is nine years older than his brother Ed. If Ed is seventeen years old, how old is Joe?

Problem 3) Dan is fourteen years older than Marge. Eight years ago, Dan was three times as old as Marge. Find their present age.

Problem 4) Jean is six years older than her brother Wayne. Three years from now, the sum of their ages will be thirty-eight. Find their present ages.

Problem 5) Nine years from now, Jack will be three times as old as he was eleven years ago. How old is he now?

Problem 6) Andy is seven years older than his wife Lori. If Andy and Lori's ages add up to fifty-one, how old are Andy and Lori?

Problem 7) Alex is fourteen years old and he is also nine years older than his sister Kristen. How old is Kristen?

Problem 8) Mark is six years younger than his sister Teri. If Teri is thirty-seven years old, how old is Mark?

Problem 9) Vicki is eleven years older than Chuck. Five years from now, Vicki will be twice as old as Chuck. Find their present age.

Problem 10) Andy is nine years older than his sister Jenny. Five years from now, the sum of their ages will be forty-three. Find their present ages.

Problem 11) Seven years from now, Monte will be three times as old as she was fifteen years ago. How old is she now?

Problem 12) Myron is three years older than his wife Denise. If Myron and Denise's ages add up to sixty-five, how old are Myron and Denise?

Problem 13) Mike is seventy-one years old and he is also twenty-eight years older than his daughter Kim. How old is Kim?

Problem 14) Anika is five years older than her brother Shane. If Shane is twenty-five years old, how old is Anika?

Problem 15) Sam is twenty-six years older than Brian. Eight years from now, Sam will be three times as old as Brian. Find their present age.

Problem 16) Paul is eight years older his wife Lisa. Twenty years ago, the sum of their ages was twenty-four. Find their present ages.

Problem 17) Eleven years from now, Nicholas will be three times as old as he was twenty-five years ago. How old is he now?

Problem 18) Jim is four years older than his sister Kathy. If Jim and Kathy's ages add up to fifty-four, how old are Jim and Kathy?

Problem 19) John is sixty-one years old and he is also five years older than his wife Stacey. How old is Stacey?

Problem 20) Paul is twenty-two years older than his daughter Jessica. If Jessica is forty-four years old, how old is Paul?

Answers - Algebra Word Problems – Lesson 5 - Worksheet 5 - Algebra Word Problems Involving Age

Problem 1) Alex is fourteen years old and he is also nine years older than his sister Kristen. How old is Kristen?

Solution:

Let A represent Alex's age and let K represent Kristen's age. From the problem we can write two equations:

$$A = 14$$

$$A = K + 9$$

Substitute 14 for A into the second equation and solve for K :

$$14 = K + 9$$

$$14 - 9 = K + 9 - 9$$

$$K = 5$$

Kristen is 5 years old.

Answer: 5

Problem 2) Joe is nine years older than his brother Ed. If Ed is seventeen years old, how old is Joe?

Solution:

Let J represent Joe's age and let E represent Ed's age. From the problem we can write the following equations:

$$J = E + 9$$

$$E = 17$$

Substitute 17 into the first equation for E and solve for J :

$$J = 17 + 9$$

$$J = 26$$

Joe is 26 years old.

Answer: 26

Problem 3) Dan is fourteen years older than Marge. Eight years ago, Dan was three times as old as Marge. Find their present age.

Solution:

Let D represent Dan's age and let M represent Marge's age. From the problem we can write the following equations:

$$D = M + 14$$

$$D - 8 = 3(M - 8)$$

Substitute $M + 14$ into the second equation for D and solve for M :

$$M + 14 - 8 = 3(M - 8)$$

$$M + 6 = 3M - 24$$

$$24 + 6 = 3M - M$$

$$2M = 30$$

$$M = 15$$

Use $M = 15$ and solve for D : $D = M + 14 = 15 + 14 = 29$

Marge is 15 years old and Dan is 29 years old.

Answer: Dan: 29; Marge: 15

Problem 4) Jean is six years older than her brother Wayne. Three years from now, the sum of their ages will be thirty-eight. Find their present ages.

Solution:

Let J represent Jean's age and let W represent Wayne's age. From the problem we can write the following equations:

$$J = W + 6$$

$$J + 3 + W + 3 = 38$$

Substitute $W + 6$ into the second equation for J and solve for W :

$$W + 6 + 3 + W + 3 = 38$$

$$2W + 12 = 38$$

$$2W = 26$$

$$W = 13$$

Use $W = 13$ and solve for J : $J = W + 6 = 13 + 6 = 19$

Jean is 19 years old and Wayne is 13 years old.

Answer: Jean: 19; Wayne: 13

Problem 5) Nine years from now, Jack will be three times as old as he was eleven years ago. How old is he now?

Solution:

Let J represent Jack's age. From the problem we can write the following equation:

$$J + 9 = 3(J - 11)$$

Solve for J :

$$J + 9 = 3J - 33$$

$$9 = 2J - 33$$

$$42 = 2J$$

$$J = 21$$

Check your solution:

$$3(21 - 11) = 21 + 9$$

$$30 = 30$$

Answer: 21

Problem 6) Andy is seven years older than his wife Lori. If Andy and Lori's ages add up to fifty-one, how old are Andy and Lori?

Solution:

Let A represent Andy's age and let L represent Lori's age. From the problem we can write the following equations:

$$A = L + 7$$

$$A + L = 51$$

Substitute $L + 7$ into the second equation for A and solve for L :

$$L + 7 + L = 51$$

$$2L + 7 = 51$$

$$2L = 44$$

$$L = 22$$

Use $L = 22$ and solve for A : $A = L + 7 = 22 + 7 = 29$

Andy is 29 years old and Lori is 22 years old.

Answer: Andy: 29; Lori: 22

Problem 7) Alex is fourteen years old and he is also nine years older than his sister Kristen. How old is Kristen?

Solution:

Let A represent Alex's age and let K represent Kristen's age. From the problem we can write two equations:

$$A = 14$$

$$A = K + 9$$

Substitute 14 for A into the second equation and solve for K :

$$14 = K + 9$$

$$14 - 9 = K + 9 - 9$$

$$K = 5$$

Kristen is 5 years old.

Answer: 5

Problem 8) Mark is six years younger than his sister Teri. If Teri is thirty-seven years old, how old is Mark?

Solution:

Let M represent Mark's age and let T represent Teri's age. From the problem we can write the following equations:

$$M = T - 6$$

$$T = 37$$

Substitute 37 into the first equation for T and solve for M :

$$M = 37 - 6$$

$$M = 31$$

Mark is 31 years old.

Answer: 31

Problem 9) Vicki is eleven years older than Chuck. Five years from now, Vicki will be twice as old as Chuck. Find their present age.

Solution:

Let V represent Vicki's age and let C represent Chuck's age. From the problem we can write the following equations:

$$V = C + 11$$

$$V + 5 = 2(C + 5)$$

Substitute $C + 11$ into the second equation for V and solve for C :

$$C + 11 + 5 = 2(C + 5)$$

$$C + 16 = 2C + 10$$

$$16 = C + 10$$

$$C = 6$$

Use $C = 6$ and solve for V : $V = C + 11 = 6 + 11 = 17$

Vicki is 17 years old and Chuck is 6 years old.

Check your solution:

$$17 + 5 = 2(6 + 5)$$

$$22 = 22$$

Answer: Vicki: 17; Chuck: 6

Problem 10) Andy is nine years older than his sister Jenny. Five years from now, the sum of their ages will be forty-three. Find their present ages.

Solution:

Let A represent Andy's age and let J represent Jenny's age. From the problem we can write the following equations:

$$A = J + 9$$

$$A + 5 + J + 5 = 43$$

Substitute $J + 9$ into the second equation for A and solve for J :

$$J + 9 + 5 + J + 5 = 43$$

$$2J + 19 = 43$$

$$2J = 24$$

$$J = 12$$

Use $J = 12$ and solve for A : $A = J + 9 = 12 + 9 = 21$

Andy is 21 years old and Jenny is 12 years old.

Check your solution:

$$12 + 5 + 21 + 5 = 17 + 26 = 43$$

Answer: Andy: 21; Jenny: 12

Problem 11) Seven years from now, Monte will be three times as old as she was fifteen years ago. How old is she now?

Solution:

Let M represent Monte's age. From the problem we can write the following equation:

$$M + 7 = 3(M - 15)$$

Solve for M :

$$M + 7 = 3M - 45$$

$$45 + 7 = 2M$$

$$2M = 52$$

$$M = 26$$

Check your solution:

$$26 + 7 = 33$$

$$3(26 - 15) = 3(11) = 33$$

Answer: 26

Problem 12) Myron is three years older than his wife Denise. If Myron and Denise's ages add up to sixty-five, how old are Myron and Denise?

Solution:

Let M represent Myron's age and let D represent Denise's age. From the problem we can write the following equations:

$$M = D + 3$$

$$M + D = 65$$

Substitute $D + 3$ into the second equation for M and solve for D :

$$D + 3 + D = 65$$

$$2D + 3 = 65$$

$$2D = 62$$

$$D = 31$$

Use $D = 31$ and solve for M : $M = D + 3 = 31 + 3 = 34$

Myron is 34 years old and Denise is 31 years old.

Answer: Myron: 34; Denise: 31

Problem 13) Mike is seventy-one years old and he is also twenty-eight years older than his daughter Kim. How old is Kim?

Solution:

Let M represent Mike's age and let K represent Kim's age. From the problem we can write two equations:

$$M = 71$$

$$M = K + 28$$

Substitute 71 for M into the second equation and solve for K :

$$71 = K + 28$$

$$71 - 28 = K + 28 - 28$$

$$K = 43$$

Kim is 43 years old.

Answer: 43

Problem 14) Anika is five years older than her brother Shane. If Shane is twenty-five years old, how old is Anika?

Solution:

Let A represent Anika's age and let S represent Shane's age. From the problem we can write the following equations:

$$A = S + 5$$

$$S = 25$$

Substitute 25 into the first equation for S and solve for A :

$$A = 25 + 5$$

$$A = 30$$

Anika is 30 years old.

Answer: 30

Problem 15) Sam is twenty-six years older than Brian. Eight years from now, Sam will be three times as old as Brian. Find their present age.

Solution:

Let S represent Sam's age and let B represent Brian's age. From the problem we can write the following equations:

$$S = B + 26$$

$$S + 8 = 3(B + 8)$$

Substitute $B + 26$ into the second equation for S and solve for B :

$$B + 26 + 8 = 3(B + 8)$$

$$B + 34 = 3B + 24$$

$$34 = 2B + 24$$

$$10 = 2B$$

$$B = 5$$

Use $B = 5$ and solve for S : $S = B + 26 = 5 + 26 = 31$

Sam is 31 years old and Brian is 5 years old.

Check your solution:

$$31 + 8 = 39$$

$$3(5 + 8) = 3(13) = 39$$

Answer: Sam: 31; Brian: 5

Problem 16) Paul is eight years older his wife Lisa. Twenty years ago, the sum of their ages was twenty-four. Find their present ages.

Solution:

Let P represent Paul's age and let L represent Lisa's age. From the problem we can write the following equations:

$$P = L + 8$$

$$P - 20 + L - 20 = 24$$

Substitute $L + 8$ into the second equation for P and solve for L :

$$L + 8 - 20 + L - 20 = 24$$

$$2L - 32 = 24$$

$$2L = 56$$

$$L = 28$$

Use $L = 28$ and solve for P : $P = L + 8 = 28 + 8 = 36$

Paul is 36 years old and Lisa is 28 years old.

Answer: Paul: 36; Lisa: 28

Problem 17) Eleven years from now, Nicholas will be three times as old as he was twenty-five years ago. How old is he now?

Solution:

Let N represent Nicholas's age. From the problem we can write the following equation:

$$N + 11 = 3(N - 25)$$

Solve for N :

$$N + 11 = 3N - 75$$

$$11 = 2N - 75$$

$$2N = 86$$

$$N = 43$$

Answer: 43

Problem 18) Jim is four years older than his sister Kathy. If Jim and Kathy's ages add up to fifty-four, how old are Jim and Kathy?

Solution:

Let J represent Jim's age and let K represent Kathy's age. From the problem we can write the following equations:

$$J = K + 4$$

$$J + K = 54$$

Substitute $K + 4$ into the second equation for J and solve for K :

$$K + 4 + K = 54$$

$$2K + 4 = 54$$

$$2K = 50$$

$$K = 25$$

Use $K = 25$ and solve for J : $J = K + 4 = 25 + 4 = 29$

Jim is 29 years old and Kathy is 25 years old.

Answer: Jim: 29; Kathy: 25

Problem 19) John is sixty-one years old, and he is also five years older than his wife Stacey. How old is Stacey?

Solution:

Let J represent John's age and let S represent Stacey's age. From the problem we can write two equations:

$$J = 61$$

$$J = S + 5$$

Substitute 61 for J into the second equation and solve for S :

$$61 = S + 5$$

$$61 - 5 = S + 5 - 5$$

$$S = 56$$

Stacey is 56 years old.

Answer: 56

Problem 20) Paul is twenty-two years older than his daughter Jessica. If Jessica is forty-four years old, how old is Paul?

Solution:

Let P represent Paul's age and let J represent Jessica's age. From the problem we can write the following equations:

$$P = J + 22$$

$$J = 44$$

Substitute 44 into the first equation for J and solve for P :

$$P = 44 + 22$$

$$P = 66$$

Paul is 66 years old.

Answer: 66
