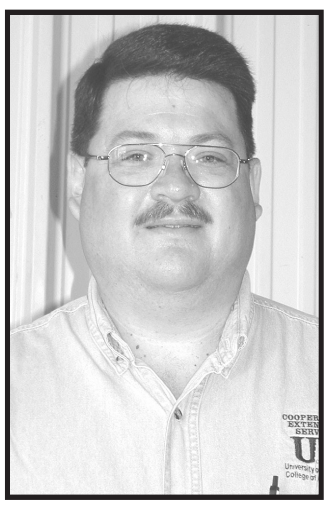
Lots of Water to Make Milk



Eric Baker
Estill County Extension Agent for Agriculture & Natural Resources

Water is important for most species' survival. Dairy cows, in particular, require large quantities to produce the creamy white liquid for which they are famous. It is important for dairy producers to provide plenty of water within a convenient location to keep their herd well hydrated.

"Cows need to consume between 30 and 50 gallons of water per day," said Donna Amaral-Phillips, extension dairy specialist for the University of Kentucky College of Agriculture, Food and Environment. "That's more than 415 pounds of water every day."

That number may sound extremely high until the consumer realizes it takes up to 4.5 pounds of water to make just 1 pound of milk, and cows produce, on average, 70 pounds, or 8 gallons of milk each day, which is equal to about 128 glasses.

Milk is 87 percent water, and without sufficient water intake, a cow's milk yield will suffer.

Dairy cows rely on saliva and other fluids to assist them in digesting feedstuffs. If they don't get enough water it starts a chain reaction—digestion, feed intake and energy decrease.

"Managing water on a per-cow basis in a dairy herd can be quite difficult for any producer," said Jeffrey Bewley, UK associate extension professor. "For this reason, dairy producers have to make decisions that benefit the entire herd. That's why we allow cows ample access to water at the UK Dairy—so they can drink as much as they want."

Dairy managers have to make sure cows have access to water in the barn at a centrally located trough. Ideally, the trough will be near a feed bunk so it's easy for cows to drink after eating. Cows usually drink the most after eating and after being milked.

"It's important for the water trough to have enough space for multiple cows to drink at the same time," he said. "Three to 5 inches of water space per cow is usually adequate, and the height of the trough should be 2 to 3 feet from the ground."

One waterer per 20 cows will help ensure cows stay hydrated. The waterers should hold at least 5 gallons at time, with a refill rate of at least 2.5 gallons per minute to keep the fresh, clean water flowing. So while it may be hard to monitor each cow's water intake, providing enough fresh water and space for the entire herd usually gets the job done.

For more information, contact the Estill County Extension office at 723-4557.

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Wishing Well®

4	8	7	2	8	7	2	4	2	7	3	2	4
B	S	A	P	O	S	R	E	O	P	A	N	C
6	3	7	5	6	3	5	3	8	5	6	7	4
V	T	L	D	I	I	O	D	C	Y	S	E	O
6	5	7	4	3	4	8	2	7	4	5	7	4
I	O	N	M	Y	P	I	O	D	A	U	I	S
5	3	2	7	6	4	8	6	4	5	6	8	3
R	S	U	D	T	S	A	O	I	V	R	L	U
6	2	7	2	5	7	8	5	6	2	8	5	4
A	N	I	C	E	D	A	R	R	E	C	Y	O
3	6	8	7	5	2	4	7	6	5	8	4	5
M	R	C	E	B	D	N	A	I	E	L	A	S
8	4	6	2	8	2	6	2	5	4	2	6	8
A	T	V	L	I	O	E	V	T	E	E	S	M

HERE IS A PLEASANT LITTLE GAME that will give you a message every day. It's a numerical puzzle designed to spell out your fortune. Count the letters in your first name. If the number of letters is 6 or more, subtract 4. If the number is less than 6, add 3. The result is your key number. Start at the upper left-hand corner and check one of your key numbers, left to right. Then read the message the letters under the checked figures give you.

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CryptoQuip

This is a simple substitution cipher in which each letter used stands for another. If you think that X equals O, it will equal O throughout the puzzle. Solution is accomplished by trial and error.

Clue: **Q** equals **E**

YAQ OYRC, ZAJBA ARE FQBQSYPX UQQS UREPX ADFY, ZRO MLDSE JS YAQ ZLLEO ARSCJSC LS MLF EQQF PJMQ.

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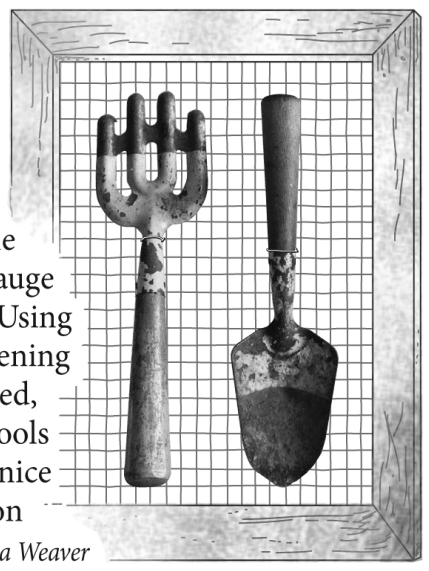
The Garden Bug

Displaying vintage tools



Use a "shabby chic" wooden frame as a mount for a piece of heavy-gauge chicken wire cut to fit the frame. Using small wire pieces, attach old gardening tools to the chicken wire in a varied, pleasing arrangement. The aged tools display well together and make a nice gift for the gardening enthusiast on your holiday shopping list. *- Brenda Weaver*

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Birding BITS by Cindy Brook

A Thankful Heart

Sometimes I like to sit on a stool in front of my patio doors and watch the birds while I eat dinner. I think about how grateful I am for the good life I have, and how a yard full of songbirds makes it even better. They fill me with joy.

E-mail: birdingbits@cfl.rr.com

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CryptoQuote

AXYDLBAAXR is **LONGFELLOW**

One letter stands for another. In this sample, **A** is used for the three L's, **X** for the two O's, etc. Single letters, apostrophes, the length and formation of the words are all hints. Each week the code letters are different.

WPAFZIMTPS TS MFWUFZ TR IQKICR I DTZMLF; OLM WPAFZIMTPS TS UZTSHTUQF TR IQKICR I DTHF.

— MXPWIR UITSF

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Americanisms

"A man who is good enough to shed his blood for his country, is good enough to be given a square deal afterwards."

—*President Teddy Roosevelt*

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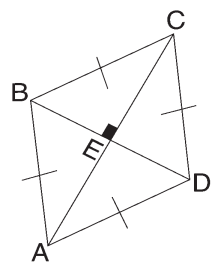
Stickeler's Puzzle

STICKELERS [sic]. by Terry Stickels

Rhombus ABCD has an area of 160 square units. BD = 16 units.

What is the length of CE? CEA is a diagonal, as is BD.



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Stickeler's Answer on Page 11

Puzzle Answers

November 8, 2017

Puzzles4Kids Answer

SAMPLE	P	MALES
CANYON	O	NANCY
SENIOR	O	SIREN
SACRED	C	READS
ESTHER	H	STEER
TASTER	E	START
HATRED	D	EARTH
BEAKER	E	BREAK
RANGES	G	NEARS
ANGELS	G	LANES
GRASSY	S	GRAYS

FEAR KNOT answer

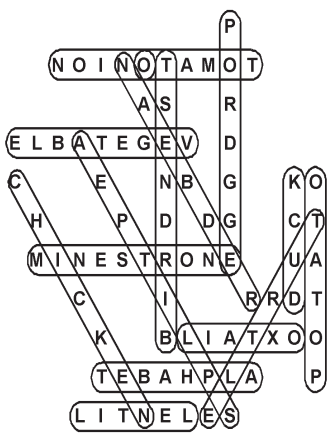
	B							
G	R	I	N	G	O			
	I	■	U	■	R	I	M	Y
	B	U	M	■	A	■	■	O
	E		B	E	N	I	G	N
					G	■	U	
	R	E	A	D	Y	■	Y	
				U	■	■	E	
				G	A	U	D	

Letter Box

Solution

T	I	Q	Z	O	L	C	Y	U
Y	L	U	T	I	C	O	Q	Z
C	O	Z	Y	Q	U	I	L	T
O	Z	T	Q	L	Y	U	C	I
U	Y	I	C	Z	T	L	O	Q
Q	C	L	I	U	O	T	Z	Y
I	T	Y	O	C	Q	Z	U	L
Z	U	O	L	Y	I	Q	T	C
L	Q	C	U	T	Z	Y	I	O

— SOUP



Even Exchange

answers

1. Clover, Clever
2. Borrow, Burrow
3. Nurse, Norse
4. Shock, Shack
5. Green, Greet
6. Trades, Grades
7. Rusty, Dusty
8. Scram, Scrap
9. Beauty, Beatty
10. Peach, Perch

Weekly SUDOKU

Answer

9	4	5	3	8	6	1	2	7
1	2	8	7	9	4	5	6	3
3	6	7	1	2	5	8	4	9
4	8	1	2	5	7	3	9	6
5	9	3	6	4	1	2	7	8
6	7	2	8	3	9	4	5	1
7	5	4	9	1	3	6	8	2
2	3	9	4	6	8	7	1	5
8	1	6	5	7	2	9	3	4

King Crossword

Answers

Solution time: 21 mins.

S	P	A	S	■	P	T	A	■	S	T	E	M
P	E	L	T	■	O	A	R	■	P	I	L	E
E	R	I	E	■	U	P	P	E	R	C	U	T
C	U	T	R	A	T	E	■	L	I	S	L	E
■	■	■	E	N	S	■	J	O	E	■	■	■
A	L	L	O	Y	■	H	A	I	R	C	U	T
R	O	E	■	■	A	I	M	■	■	O	R	R
C	U	T	L	A	S	S	■	L	O	O	N	Y
■	■	■	E	M	S	■	L	E	D	■	■	■
A	R	E	N	A	■	W	O	O	D	C	U	T
C	U	T	S	H	O	R	T	■	I	L	L	S
A	G	U	E	■	S	E	T	■	T	U	N	A
I	S	I	S	■	O	N	E	■	Y	E	A	R

CryptoQuip

answer

The stag, which had recently been badly hurt, was found in the woods hanging on for deer life.

CryptoQuote

answer

Moderation in temper is always a virtue; but moderation in principle is always a vice.
— Thomas Paine

Bible Trivia Answers

Now available by Wilson Casey! 2017 Bible Trivia box calendar loaded with daily teasers.

ANSWERS 1 .Old; 2) Bed; 3) Numbers; 4) Thousands of millions (Gen 24:60);

SCRAMBLERS

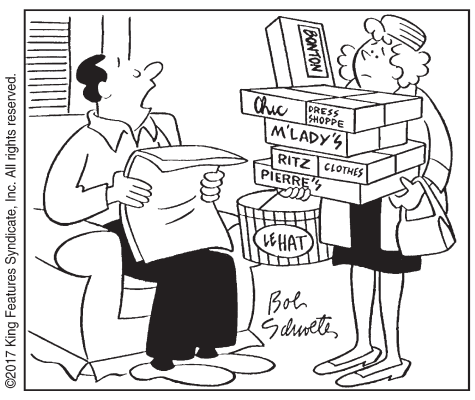
Unscramble the letters within each rectangle to form four ordinary words. Then rearrange the boxed letters to form the mystery word, which will complete the gag!

Delight
TARTE ☐ ☐ ___ ___ ___

Make Do
CUFFIES ___ ___ ☐ ___ ☐ ___ ___

Intense
RANTED ___ ___ ___ ___ ___ ☐ ___

Adorn
SHARING ___ ___ ___ ___ ___ ___ ☐



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" What's the matter, don't your credit cards work in _ _ _ _ _ _ stores?"

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