On The Button

Here is a BUTTON you can cut out and wear. To decode the button:

Do each exercise and find your answer around the rim of the button. Each time the answer appears, write the letter of the exercise above it.

(G) $\frac{1}{5} \div \frac{2}{3}$

(H) $\frac{1}{4} \div \frac{3}{8}$

(O) $\frac{2}{5} \div \frac{7}{10}$

(M) $\frac{2}{15} \div \frac{1}{6}$

(T) $\frac{4}{5} \div \frac{1}{2}$

(E) $\frac{8}{9} \div \frac{2}{3}$

(A) $\frac{5}{12} \div \frac{3}{16}$

(S) $\frac{3}{4} \div \frac{1}{8}$

(W) $5 \div \frac{1}{4}$

(R) $6 \div \frac{4}{7}$

(N) $\frac{1}{2} \div 4$

(C) $\frac{9}{10} \div 12$

(V) $\frac{5}{8} \div \frac{3}{10}$

(L) $\frac{8}{11} \div \frac{2}{11}$

(I) A turtle walked $\frac{1}{2}$ mile at the rate of $\frac{1}{5}$ mile per hour. How long did it take?

_____ hr

(F) A certain math textbook is $\frac{3}{4}$ of an inch thick. How many of these books will fit on a shelf that is 3 feet wide? (1 ft = 12 in.)

_____

Abracadabra, It's Magic

1. What magic trick does Mr. Utterbunk perform every evening?

$1\frac{7}{18}$	$2\frac{5}{8}$	$\frac{1}{4}$	6	$\frac{8}{35}$	$\frac{3}{4}$	$4\frac{4}{7}$	$\frac{5}{12}$	$6\frac{8}{9}$	$\frac{2}{9}$	$4\frac{4}{7}$	6	$\frac{3}{10}$	$\frac{3}{7}$	$1\frac{11}{24}$	$1\frac{1}{2}$	$\frac{7}{10}$	$1\frac{11}{24}$	$\frac{3}{4}$	$1\frac{11}{24}$	$\frac{7}{10}$	$2\frac{5}{8}$

2. What did the magician say to the fisherman?

										,								
$7\frac{1}{3}$	$\frac{2}{9}$	$10\frac{2}{3}$	$1\frac{2}{3}$	$4\frac{3}{8}$	$1\frac{11}{24}$	$2\frac{3}{4}$	$10\frac{2}{3}$	$\frac{3}{10}$	$2\frac{7}{9}$		$9\frac{7}{9}$	$1\frac{11}{24}$	$4\frac{4}{7}$	$2\frac{3}{8}$	$\frac{7}{8}$	$10\frac{2}{3}$	$\frac{3}{10}$	$2\frac{7}{9}$

To decode the answers to the MAGICAL mysteries:
Do each exercise below and find your answer in the code. Each time the answer appears, write the letter of the exercise above it.

(K) $2\frac{2}{3} \div 1\frac{3}{5}$

(E) $4\frac{1}{2} \div 1\frac{5}{7}$

(H) $3\frac{1}{3} \div 2\frac{2}{5}$

(S) $2\frac{1}{4} \div 5\frac{2}{5}$

(O) $3\frac{3}{4} \div 12\frac{1}{2}$

(R) $8 \div 10\frac{2}{3}$

(I) $\frac{7}{12} \div 2\frac{5}{8}$

(Y) $9\frac{1}{2} \div 4$

(U) $2\frac{2}{7} \div 10$

(P) $5\frac{1}{2} \div \frac{3}{4}$

(T) $7\frac{4}{5} \div 1\frac{3}{10}$

(N) $6 \div 1\frac{5}{16}$

(D) $8\frac{1}{3} \div 3$

(A) $4\frac{7}{12} \div 3\frac{1}{7}$

(G) There are 3 boys and 2 girls in the Krunch family. Mr. Krunch bought $3\frac{1}{2}$ pounds of candy to divide equally among them. How much candy did each child get?

_____ lb

(C) It takes 1 cup of liquid fertilizer to make $7\frac{1}{2}$ gallons of spray. How much liquid fertilizer is needed to make 80 gallons of spray?

_____ c

Math Without Computing

$40 \div 7\frac{1}{2} = 5\frac{1}{3}$	$12 \div 1\frac{1}{4} = 9\frac{3}{5}$	$62\frac{1}{2} \div 4 = 15\frac{5}{8}$

Use the quotients in the box above to answer the following questions:

(1) Ms. Mundo made 40 ounces of tropical punch to pour into glasses. Each glass holds $7\frac{1}{2}$ ounces.

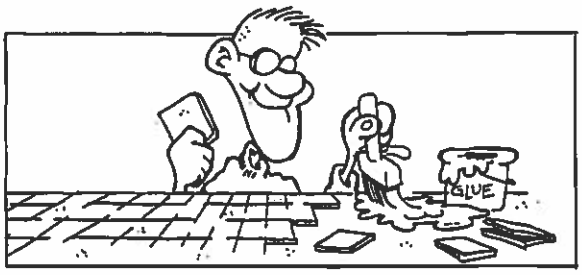
A. How many glasses will be completely filled?
B. How many glasses will be needed to hold all the punch?
C. What fraction of the last glass is full of punch?

(2) Elevator Music, Inc., has been hired to provide 12 hours of continuous taped music. Each tape plays for $1\frac{1}{4}$ hours.

A. How many tapes will be needed altogether?
B. How many of the tapes will be played completely?
C. What fraction of the last tape will be played?

(3) Mr. Reznick is gluing ceramic tiles on a kitchen counter $62\frac{1}{2}$ inches long. Each tile is 4 inches square.

A. How many complete tiles are used in each row?
B. How many tiles are needed for each row altogether?
C. In each row, what fraction of the last tile is used?



(4) Dawn has 12 yards of silk. She needs $1\frac{1}{4}$ yards of silk to make one skirt. How many skirts can she make?

(5) Mr. Kazoo is planning to build a fence gate 40 inches wide. He plans to use boards $7\frac{1}{2}$ inches wide. How many boards should he buy?

(6) Andrea cut $62\frac{1}{2}$ inches of ribbon into 4 equal hair ribbons. How long was each hair ribbon?

(7) Nuts to You has 40 pounds of almonds to pack into cans. Each can holds $7\frac{1}{2}$ pounds. After completely filling as many cans as possible, what part of another can is left?

(8) The coach needs 12 pounds of peanut butter to feed his football team. If he buys peanut butter in jars containing $1\frac{1}{4}$ pounds, how many jars should he buy?

(9) Naoki has 62% feet of crepe paper left on a roll. She is cutting it into streamers 4 feet long.

A. How many 4-foot streamers can she cut?
B. What fraction of a streamer will be left on the roll?

what Did the Ms. Snerd Say When Her Son Ate 17 Chocolate-Chip Waffles with 2 Pints of Maple Syrup?

Do each exercise below. Find your answer and notice the letter next to it. Look for this letter in the string of letters near the bottom of the page and CROSS IT OUT each time it appears. When you finish, write the remaining letters in the rectangle at the bottom of the page.

(1) $\frac{2}{3} \times \frac{1}{5}$

(2) $\frac{3}{4} \times \frac{7}{12}$

(3) $\frac{3}{8}$ of $\frac{4}{9}$

(4) $\frac{7}{10} \div \frac{1}{2}$

(5) $\frac{5}{12} \div \frac{5}{8}$

(6) $\frac{9}{20} \div \frac{4}{15}$

(7) $1\frac{1}{3} \times 2\frac{1}{2}$

(8) $5\frac{1}{4} \times 3\frac{1}{7}$

(9) $1\frac{7}{8} \times \frac{7}{10} \times 4$

(10) $4\frac{1}{2} \div 1\frac{4}{5}$

(11) $2\frac{5}{8} \div 3\frac{3}{4}$

(12) $7\frac{3}{10} \div 5$

(13) $12 \div 3\frac{1}{2}$

(14) $6\frac{1}{4} \div \frac{5}{6}$

(15) $\frac{2}{3} \times \frac{2}{3} \times \frac{2}{3}$

(16) Farmer Brown can harvest $2\frac{1}{3}$ acres of corn in 1 day. How many acres of corn can he harvest in $10\frac{1}{2}$ days?

_____ acres

(17) Farmer Brown can harvest $2\frac{1}{3}$ acres of corn in 1 day. How many days will it take him to harvest $10\frac{1}{2}$ acres of corn?

_____ days

• ANSWERS •

(R) $7\frac{1}{2}$	(D) $3\frac{1}{3}$			(G) $\frac{7}{16}$	(W) $5\frac{2}{3}$
(T) $1\frac{2}{5}$	(F) 27	(B) $\frac{7}{10}$	(K) $\frac{2}{3}$	(I) $24\frac{1}{2}$	(Y) $16\frac{1}{2}$
(S) $4\frac{1}{2}$	(J) $\frac{2}{15}$	(P) $5\frac{1}{4}$	(U) $3\frac{3}{7}$	(H) $\frac{9}{20}$	(A) $8\frac{1}{4}$
(M) $2\frac{1}{2}$	(N) $\frac{8}{27}$	(Z) $\frac{1}{6}$	(L) $2\frac{5}{6}$	(V) $1\frac{11}{16}$	(C) $1\frac{23}{50}$

T C S H G M O N D W I W P K S A R Y J F S I F T B U L Z V P E N

ANSWER TO PUZZLE:

What Do Sea Monsters Eat?

Cross out the box containing each correct answer. When you finish, write the letters from the remaining boxes in the spaces at the bottom of the page.

(1) Ms. Daza bought $3\frac{1}{2}$ yards of yellow fabric. She used $\frac{2}{3}$ of the fabric to make a chicken costume. How much fabric did she use? _____ yd

(2) Julia studied math for $3\frac{1}{3}$ hours during the 4 days before her last math test. What was the average amount of time she studied each day? _____ h

(3) There is less gravity on the planet Trang than on Earth. In fact, you could jump about $2\frac{2}{3}$ times as high on Trang as on Earth. If you can jump $4\frac{1}{4}$ feet on Earth, how high could you jump on Trang? _____ ft

(4) A gasoline pump delivers $4\frac{2}{5}$ gallons of gas per minute. How many minutes will it take to fill a gas tank that holds $16\frac{1}{2}$ gallons? _____ min

(5) A piece of plywood 24 inches wide is cut into strips $2\frac{1}{2}$ inches wide. How many strips of this width can be cut? _____

(6) The distance a bicycle travels with each turn of its wheels is about $3\frac{1}{7}$ times the tire diameter. The tires on Mike's bicycle have a diameter of $24\frac{1}{2}$ inches. How far does it travel with each turn of the wheels? _____ in.

(7) An aquarium holds $6\frac{1}{4}$ gallons of water. The water level has dropped to $\frac{4}{5}$ of this amount. How much water should be added to fill the aquarium? _____ gal

(8) Sean used $\frac{3}{4}$ cup of sugar to make a dozen brownies. How much sugar is in each brownie? _____ cup

WA	LO	FI	VE	DI	SH	AN
77	$\frac{5}{6}$	$\frac{3}{20}$	$\frac{1}{16}$	$3\frac{3}{4}$	$74\frac{1}{2}$	$10\frac{3}{4}$
TS	DS	EA	HI	OU	PS	IT
$2\frac{1}{3}$	8	$1\frac{1}{4}$	$1\frac{5}{8}$	9	$3\frac{1}{6}$	$11\frac{1}{3}$

How's Business?

1. Muffler salesman:

" _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ "

$\frac{5}{16}$ $5\frac{5}{7}$ $1\frac{5}{12}$ $3\frac{7}{10}$ $1\frac{1}{14}$ $2\frac{2}{9}$ $10\frac{1}{4}$ 16 $3\frac{3}{4}$ $5\frac{1}{2}$

2. Fireworks salesman:

" _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ "

$7\frac{1}{2}$ $\frac{5}{16}$ $3\frac{7}{10}$ $\frac{3}{8}$ $\frac{3}{8}$ $4\frac{3}{5}$ $\frac{5}{6}$ 18 $\frac{7}{15}$ $\frac{7}{15}$ $\frac{11}{15}$ 16 $3\frac{3}{4}$ $5\frac{1}{2}$

3. Lumber salesman:

" _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ "

16 $5\frac{3}{4}$ $9\frac{4}{5}$ $\frac{7}{15}$ $\frac{7}{15}$ $8\frac{9}{16}$ $\frac{5}{16}$ $3\frac{3}{4}$ $9\frac{1}{2}$ $5\frac{7}{18}$ $3\frac{3}{4}$ $\frac{7}{15}$ $9\frac{4}{5}$

Each of these salesmen is answering the question, "HOW'S BUSINESS?" To decode their answers:

Do each exercise below and find your answer in the code. Each time the answer appears, write the letter of the exercise above it.

(M) $\frac{1}{3} + \frac{2}{5}$

(L) $\frac{7}{8} - \frac{1}{2}$

(H) $\frac{3}{4} + \frac{2}{3}$

(D) $3\frac{5}{16} + 5\frac{1}{4}$

(G) $9\frac{7}{10} - 4\frac{1}{5}$

(T) $7\frac{2}{3} + 2\frac{7}{12}$

(K) $13\frac{5}{9} - 8\frac{1}{6}$

(Y) $6\frac{1}{2} - 1\frac{9}{10}$

(E) $\frac{3}{8} \times \frac{5}{6}$

(U) $\frac{3}{4} \div \frac{7}{10}$

(I) $\frac{2}{5}$ of 40

(R) $4\frac{1}{2} \times 1\frac{2}{3}$

(S) $8\frac{1}{3} \div 3\frac{3}{4}$

(B) $2\frac{5}{8} \times \frac{4}{7} \times 12$

(X) $20 \div 3\frac{1}{2}$

(A) $1\frac{3}{5} \times 2\frac{5}{16}$

(O) $4\frac{2}{3} \div 10$

(N) George is making 8 gallons of Tropical Trip punch. He has already poured in $1\frac{3}{4}$ gal of pineapple juice and $2\frac{1}{2}$ gal of orange juice. The only other ingredient is 7-Up. How much 7-Up does George need? _____ gal

(W) Martha likes to walk around a park near her house. The park is square, $\frac{7}{10}$ mi on each side. One morning she walked around the park $3\frac{1}{2}$ times before stopping to rest. How far had she walked? _____ mi

Why Did Zorna Flunk the Grammar Test?

Solve each problem below. Find your solution and notice the two letters next to it. Write these letters in the two boxes above the exercise number at the bottom of the page.

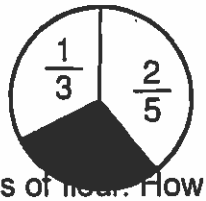
(1) Joe Ravioli went running 3 days this week. He ran $2\frac{1}{2}$ mi on Monday, $2\frac{3}{10}$ mi on Wednesday, and $3\frac{2}{5}$ mi on Friday. How far did he run altogether this week?

(2) Nuts to You sells trail mix in 16-ounce packages. Half the weight is peanuts. There are also 2 oz of almonds, 1 oz of cashews, and 3 oz of raisins. The rest is chocolate chips. What fraction of the mix is chocolate chips?

(3) Six Flags Amusement Park has found that $\frac{3}{5}$ of its customers ride the Colossus roller coaster. Of these, $\frac{1}{4}$ ride it again. What fraction of the customers ride the roller coaster twice?

(4) A record album is $\frac{3}{16}$ of an inch thick. How many albums can be stacked to fit in a box 12 in. high?

(5) In the figure shown to the right, what fractional part of the circle is shaded?



(6) A recipe for 2 dozen cookies calls for $1\frac{1}{3}$ cups of flour. How much flour would be needed to make 5 dozen cookies?

(7) A backpacking club can average $2\frac{1}{2}$ miles per hour. At that rate, how long will it take for a hike of $8\frac{3}{4}$ miles?

(8) Lisa is working on plans for a 12-acre housing development. A park will cover $2\frac{1}{2}$ acres, and paved areas will take $1\frac{3}{4}$ acres. How many acres are left for home sites?

(9) Biff earned $45 working at Happy Days Drive-In. He spent $\frac{1}{3}$ of the money on gas for his car and $\frac{1}{5}$ of it on flowers for his girl friend. How much money does he have left for the big date?

(IT) $\frac{1}{4}$

(EN) $3\frac{1}{2}$ h

(EM) $2\frac{3}{4}$ c

(AD) $\frac{3}{20}$

(MM) $21

(TO) $8\frac{3}{8}$

(AS) $8\frac{1}{5}$ mi

(TH) $\frac{3}{10}$

(AT) $4\frac{1}{8}$ h

(SE) 64

(LI) $8\frac{1}{2}$ mi

(EH) $3\frac{1}{3}$ c

(SH) $\frac{1}{8}$

(NO) $7\frac{3}{4}$

(RE) $25

(CO) $\frac{4}{15}$

(UR) 50

2	6	3	8	5	9	1	7	4