Riddle: What's The Difference Between A Thief And A Church Bell?

The answer to this riddle is written in code at the bottom of the page. To break this code, use rods to work the problems below. If the statement is true, circle the letter in the column labeled true. If the statement is false, circle the letter in the column labeled false. Match the circled letters with the problem numbers to answer the riddle at the bottom of the page.

Prob.	True	False	Statement
1	S	B	White is $\frac{1}{10}$ of orange.
2	L	V	White is $\frac{1}{7}$ of black.
3	O	E	Green is $\frac{1}{6}$ of (orange & brown).
4	T	M	Red is $\frac{1}{7}$ of (orange & yellow).
5	S	E	Red is $\frac{1}{6}$ of (orange & green).
6	W	R	Red is $\frac{1}{9}$ of (orange & blue).
7	Y	T	Purple is $\frac{1}{6}$ of (orange & orange & yellow).
8	F	A	Red is $\frac{1}{8}$ of (orange & dark green).
9	N	U	Green is $\frac{1}{5}$ of (orange & yellow).
10	C	P	Yellow is $\frac{1}{5}$ of (orange & orange & purple).
11	H	D	Purple is $\frac{1}{5}$ of (orange & orange).
12	Y	A	Green is $\frac{1}{7}$ of (orange & orange & red).

Riddle Answer

3	9	5

1	7	5	12	2	1

8	6	3	4

7	11	5

10	5	3	10	2	5

;

7	11	5

3	7	11	5	6

10	5	12	2	1

8	6	3	4

7	11	5

1	7	5	5	10	2	5

.

RIDDLE: What Do You Get If You Cross An Elephant And A Cactus?

The answer to this riddle is written in code at the bottom of the page. For problems 1 - 6, use Table I to match the problem number with the rod code for the color name of the rod that makes the sentence true.

Cover the diagram with rods.

blue								
green			green			green		
w	w	w	w	w	w	w	w	w

1) $\frac{1}{3}$ of blue = ☐
2) $\frac{1}{9}$ of blue = ☐
3) $\frac{2}{9}$ of blue = ☐
4) $\frac{4}{9}$ of blue = ☐
5) $\frac{2}{3}$ of blue = ☐
6) $\frac{8}{9}$ of blue = ☐

Table I

	White	Red	Green	Purple	Yellow	Dark green	blacK	browN	bluE	Orange
Rod Codes:	W	R	G	P	Y	D	K	N	E	Ø

For problems 7 - 16, find the rods which are the given fractional parts of blue. Compare these to tell whether the statement in Table II is true or false. Circle the first letter for true, second for false. Then match the problem number with the circled letter.

Table II

Prob	True	False	Statement
7	R	T	$\frac{1}{3} < \frac{2}{9}$
8	A	E	$\frac{1}{9} > \frac{1}{3}$
9	I	L	$\frac{2}{9} < \frac{1}{3}$
10	M	U	$\frac{5}{9} = \frac{1}{3}$
11	O	Y	$\frac{6}{9} = \frac{2}{3}$

Prob	True	False	Statement
12	D	C	$\frac{8}{9} < \frac{2}{3}$
13	B	F	$\frac{2}{3} > \frac{5}{9}$
14	L	G	$\frac{1}{3} = \frac{3}{9}$
15	H	N	$\frac{2}{3} < \frac{7}{9}$
16	T	S	$\frac{1}{3} > \frac{4}{9}$

Riddle Answer

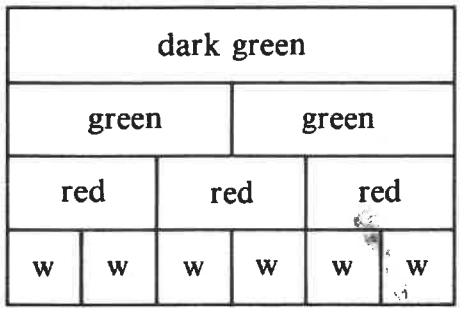
7	15	8	13	9	1	1	8	16	7	4	11	3	12	10	4	9	6	8

9	6	7	15	8	2	11	3	14	5

RIDDLE: What's More Earth-Shattering Than An Elephant Playing Hopscotch?

The answer to this riddle is written in code at the bottom of the page. For problems 1 - 5, use Table I to match the problem number with the rod code for the color name of the rod that makes the sentence true.

Cover the diagram with rods.



Problems:

1) $\frac{1}{2}$ of dark green = ☐
2) $\frac{1}{3}$ of dark green = ☐
3) $\frac{1}{6}$ of dark green = ☐
4) $\frac{2}{3}$ of dark green = ☐
5) $\frac{5}{6}$ of dark green = ☐

Table I

	White	Red	Green	Purple	Yellow	Dark green	blacK	browN	bluE	Orange
Rod Codes:	W	R	G	P	Y	D	K	N	E	Ø

For problems 6-15, find the rods which are the given fractional parts of dark green. Compare these to tell whether the statement in Table II is true or false. Circle the first letter if the sentence is true. Circle the second letter if the sentence is false. Then match the problem number with the circled letter.

Table II

Prob.	True	False	Statement
6	U	A	$\frac{1}{2} < \frac{1}{3}$
7	I	M	$\frac{2}{3} > \frac{3}{6}$
8	O	R	$\frac{1}{3} = \frac{2}{6}$
9	S	T	$\frac{1}{6} > \frac{1}{3}$
10	D	E	$\frac{4}{6} > \frac{2}{3}$

Prob	True	False	Statement
11	F	G	$\frac{1}{6} < \frac{1}{2}$
12	Y	S	$\frac{5}{6} < \frac{2}{3}$
13	L	P	$\frac{1}{2} = \frac{3}{6}$
14	N	T	$\frac{2}{3} = \frac{4}{6}$
15	A	H	$\frac{2}{6} > \frac{1}{2}$

Riddle Answer

9	3	8	15	7	4	4	8	12	4	13	6	5	7	14	1

13	10	6	4	11	2	8	1

RIDDLE: What Did Tillie Ask? What Did Millie Answer?

The answers are written in code at the bottom of the page. For problems 1 - 10, use Table I to match the problem number with the rod code for the color name of the rod that makes the sentence true.

Problems 1 - 10: Before starting these problems, make all the one-color trains for the orange rod.

1) $\frac{1}{2}$ of orange = ☐
2) $\frac{1}{5}$ of orange = ☐
3) $\frac{1}{10}$ of orange = ☐
4) $\frac{2}{5}$ of orange = ☐
5) $\frac{3}{5}$ of orange = ☐
6) $\frac{3}{10}$ of orange = ☐
7) $\frac{4}{10}$ of orange = ☐
8) $\frac{7}{10}$ of orange = ☐
9) $\frac{4}{5}$ of orange = ☐
10) $\frac{9}{10}$ of orange = ☐

Table I

	White	Red	Green	Purple	Yellow	Dark green	blacK	browN	bluE	Orange
Rod Codes:	W	R	G	P	Y	D	K	N	E	Ø

For problems 11 - 20, find the rods which are the given fractional parts of orange. Compare the two rods to tell whether the statement in Table II is true or false. Circle the first letter for true, second for false. Then match the problem number with the circled letter.

Table II

Prob	True	False	Statement
11	M	D	$\frac{1}{5} > \frac{1}{2}$
12	A	I	$\frac{3}{10} > \frac{2}{5}$
13	O	U	$\frac{1}{2} < \frac{3}{5}$
14	V	W	$\frac{4}{10} = \frac{2}{5}$
15	L	P	$\frac{7}{10} > \frac{4}{5}$

Prob	True	False	Statement
16	L	Y	$\frac{8}{10} = \frac{4}{5}$
17	A	U	$\frac{5}{10} > \frac{3}{5}$
18	E	O	$\frac{2}{5} < \frac{1}{2}$
19	T	R	$\frac{6}{10} = \frac{3}{5}$
20	S	K	$\frac{1}{10} > \frac{1}{2}$

Tillie's Question

														?
5	13	1	13	17	16	12	8	10	8	12	4	16	12	9	6

Millie's Answer

				,						,										
12	5	13	9	19	8	9	13	3	.	12	14	10	.	9	10	14	10	2	.	
20	12	15	7	16	18	11	.													

RIDDLE: How Many Hamburgers Can You Eat On An Empty Stomach?

The answer to this riddle is written in code at the bottom of the page. To break this code, use rods to work the problems below. If the statement is true, circle the letter in the column labeled true. If the statement is false, circle the letter in the column labeled false. Match the circled letters with the problem numbers to answer the riddle at the bottom of the page.

Prob.	True	False	Statement
1	Y	R	Red is $\frac{1}{3}$ of dark green.
2	D	F	Green is $\frac{1}{3}$ of brown.
3	H	C	Yellow is $\frac{1}{3}$ of (orange & purple).
4	O	I	Purple is $\frac{1}{3}$ of (orange & red).
5	T	H	Dark green is $\frac{1}{3}$ of (orange & blue).
6	N	L	Black is $\frac{1}{3}$ of (orange & orange).
7	T	S	Yellow is $\frac{1}{3}$ of (orange & yellow).
8	M	X	Dark green is $\frac{1}{3}$ of (orange & brown).
9	P	B	White is $\frac{1}{4}$ of purple.
10	R	C	Purple is $\frac{1}{4}$ of (orange & dark green).
11	I	E	Yellow is $\frac{1}{4}$ of (orange & orange).
12	G	S	Black is $\frac{1}{4}$ of (orange & orange & blue).
13	U	J	Dark green is $\frac{1}{4}$ of (orange & orange & purple).
14	R	A	Brown is $\frac{1}{4}$ of (orange & orange & orange).
15	E	I	Black is $\frac{1}{4}$ of (orange & orange & brown).
16	N	Y	Brown is $\frac{1}{4}$ of (orange & orange & orange & red).

Riddle Answer

4	16	6	1	4	16	15	14	2	7	15	10	7	5	14	7	1	4	13	10

12	7	4	8	14	3	5	11	12	16	4	7	15	8	9	7	1			

RIDDLE: Why Isn't Your Nose Twelve Inches Long?

The answer to this riddle is written in code at the bottom of the page. To break the code, use rods to work the problems below. If the statement is true, circle the letter in the column labeled true. If the statement is false, circle the letter in the column labeled false. Match the circled letters with the problem numbers to decode the answer to the riddle at the bottom of the page.

Prob.	True	False	Statement
1	T	R	Purple is $\frac{1}{2}$ of brown.
2	I	A	Yellow is $\frac{1}{2}$ of blue.
3	W	L	Red is $\frac{1}{2}$ of purple.
4	M	B	Green is $\frac{1}{2}$ of yellow.
5	S	N	Purple is $\frac{1}{2}$ of blue.
6	I	A	Yellow is $\frac{1}{2}$ of orange.
7	E	U	Green is $\frac{1}{2}$ of black.
8	F	P	Black is $\frac{1}{2}$ of (orange & purple).
9	T	D	Blue is $\frac{1}{2}$ of (orange & black).
10	L	W	Dark green is $\frac{1}{2}$ of (orange & red).
11	D	C	Brown is $\frac{1}{2}$ of (orange & black).
12	S	U	Blue is $\frac{1}{2}$ of (orange & brown).
13	N	H	Brown is $\frac{1}{2}$ of (orange & yellow).
14	B	O	Purple is $\frac{1}{2}$ of black.
15	E	I	Brown is $\frac{1}{2}$ of (orange & dark green).

Riddle Answer

4	15	11	2	7	12	15

1	13	15	5

6	1

3	14	7	10	9

4	15

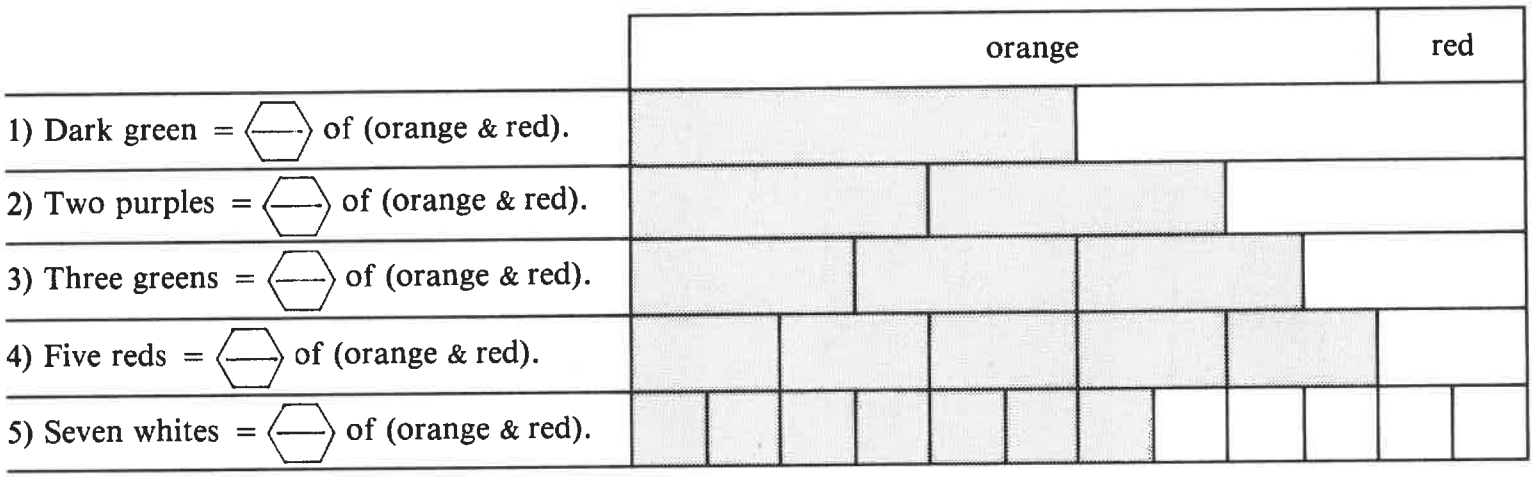
2

8	14	14	1

.

RIDDLE: What Is The Principal Part of a Horse?

The answer to this riddle is written in code at the bottom of the page. To solve the riddle, work each problem below by filling in the ⬡ with the fraction represented by the rods in the shaded part of the drawing. For problems 1 - 5 use Table I to match the fraction answer with a problem number and a letter. For problems 6 - 8 use Table II.



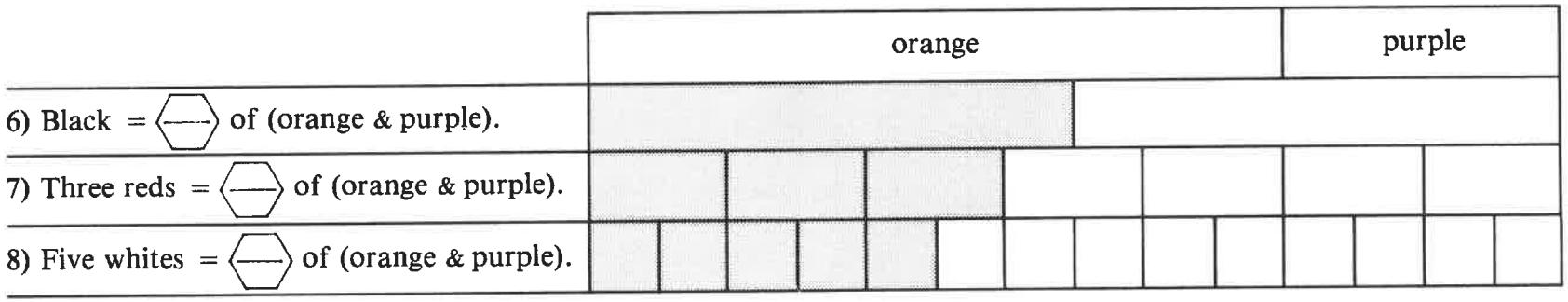


Table I

Answer	$\frac{5}{6}$	$\frac{1}{2}$	$\frac{7}{12}$	$\frac{3}{4}$	$\frac{2}{3}$
Prob. No.					
Letter	M	P	H	R	N

Table II

$\frac{5}{14}$	$\frac{3}{7}$	$\frac{1}{2}$
E	A	T

Riddle Answer												
Prob. No.	6	5	8	4	7	2	8	1	7	3	6

RIDDLE: What Is The Difference Between A Hill And A Pill?

The answer to this riddle is written in code at the bottom of the page. To break the code, work the problems below. For problems 1 - 8, use Table I to match the problem number with the rod code for the color name of the rod that makes the sentence true. For problems 9 - 16, use Table II to match the fraction answer with a problem number and letter.

Think: The answer is green. The code is G.

1) $\frac{2}{3}$ of blue = two [G]
2) $\frac{5}{8}$ of brown = five [ ]
3) $\frac{4}{5}$ of orange = four [ ]
4) $\frac{1}{2}$ of (orange & brown) = [ ]
5) $\frac{2}{3}$ of three orange rods = two [ ]
6) $\frac{2}{3}$ of orange & red = two [ ]
7) $\frac{3}{4}$ of two orange & purple = three [ ]
8) $\frac{4}{5}$ of four orange rods = four [ ]

Fill in the missing fraction.

9) Three whites = ⬡ of black.
10) Five greens = ⬡ of orange & brown.
11) Seven reds = ⬡ of orange & dark green.
12) Two whites = ⬡ of blue.
13) Two whites = ⬡ of black.
14) Two blacks = ⬡ of two orange & white.
15) Nine whites = ⬡ of orange.
16) Three dark greens = ⬡ of two orange & purple.

Table I

	White	Red	Green	Purple	Yellow	Dark green	blacK	browN	bluE	Orange
Rod Codes:	W	R	G	P	Y	D	K	N	E	O

Table II

Answer	$\frac{3}{7}$	$\frac{3}{4}$	$\frac{2}{9}$	$\frac{9}{10}$	$\frac{2}{3}$	$\frac{2}{7}$	$\frac{7}{8}$	$\frac{5}{6}$
Prob. No.								
Letter	A	P	I	T	S	L	H	U

Riddle Answer

9	11	12	13	13	12	14	11	9	3	7	15	5	1	4	15	10	16	
9	6	12	13	13	12	14	11	9	3	7	15	5	1	4	15	7	5	2	8