Breaking the Code!
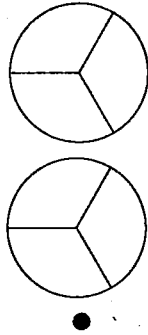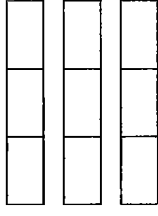
Match the division expression to the correct model. Determine the quotient for each problem to answer the riddle.

$\dfrac{1}{4} \div 3$ •
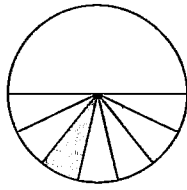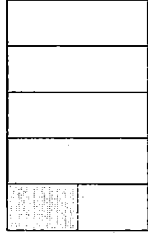
$2 \div \dfrac{1}{3}$ •

$\dfrac{1}{2} \div 7$ •

$3 \div \dfrac{1}{4}$ •

• E

• M

• T

• F

$4 \div \dfrac{1}{2}$ •

$\dfrac{1}{3} \div 5$ •

$3 \div \dfrac{1}{3}$ •

$\dfrac{1}{5} \div 2$ •

• H

• A

• O
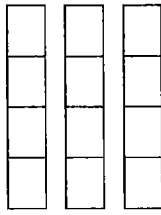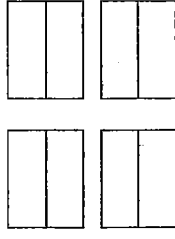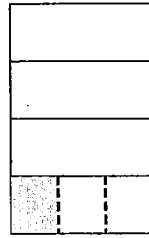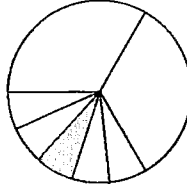
• L

Which month has 28 days?

| $\dfrac{1}{10}$	$\dfrac{1}{15}$	$\dfrac{1}{15}$	$\dfrac{1}{8}$	$\dfrac{1}{12}$	$\dfrac{1}{6}$	8	12	9	6	$\dfrac{1}{14}$

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Name _____   Date _____

TEKS 5.3L *divide* *whole numbers by unit fractions and unit fractions by whole numbers.*

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1. Mrs. Gonzales is an art teacher. She bought twenty-four glue sticks for her students to use in the next art project. If each student uses $\frac{1}{3}$ of a glue stick, what is the maximum number of students who can complete the art project?

Record your answer and fill in the bubbles. Be sure to use the correct place values.

⓪	⓪	⓪	.	⓪	⓪
①	①	①		①	①
②	②	②		②	②
③	③	③		③	③
④	④	④		④	④
⑤	⑤	⑤		⑤	⑤
⑥	⑥	⑥		⑥	⑥
⑦	⑦	⑦		⑦	⑦
⑧	⑧	⑧		⑧	⑧
⑨	⑨	⑨		⑨	⑨

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2. Sam had $\frac{1}{2}$ yards of material. He used the material to make 6 bow ties. What fraction of the material was used for each bow tie?
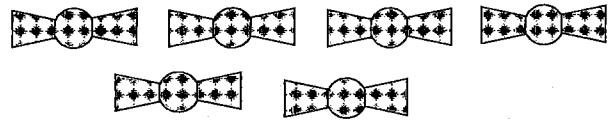
F.   3 yards

G.   12 yards

H. $\frac{1}{3}$ yards

J. $\frac{1}{12}$ yards

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3. Ms. Kim donates $\frac{1}{10}$ of her monthly income to five different charities. Each charity receives the same amount. What fraction of Ms. Kim's monthly income does each charity receive?

A. $\frac{1}{2}$

B. $\frac{2}{1}$

C. $\frac{1}{50}$

D. $\frac{50}{1}$

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4. Mr. Lee ordered 12 pizzas for his son's birthday party. If each person eats $\frac{1}{4}$ of a pizza at the party, what is the maximum number of people who can enjoy the pizza?

F.   3 people

G.   48 people

H.   24 people

J.   Not here

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5. A model for the expression $5 \div \dfrac{1}{4}$ is shown below.

$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{4}$	$\frac{1}{4}$

$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{4}$	$\frac{1}{4}$

$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{4}$	$\frac{1}{4}$

$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{4}$	$\frac{1}{4}$

$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{4}$	$\frac{1}{4}$
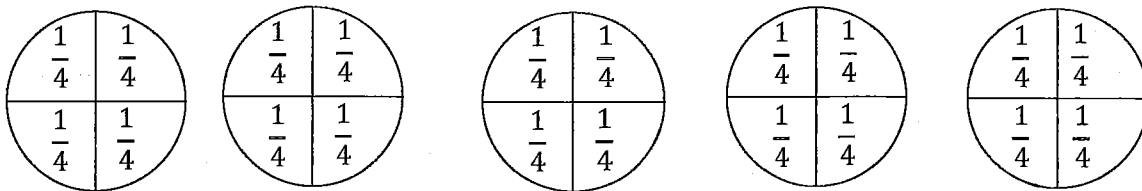
What is the quotient?

A. 20

B. $1\dfrac{1}{4}$

C. $\dfrac{20}{4}$

D. $\dfrac{20}{80}$

6. Landon and Wayne are mixing compounds for a science experiment. They will slowly add $\dfrac{1}{5}$ of an ounce of sodium chloride (salt) to a beaker of liquid over a 3 hour time span. If they add an equal amount each hour, what amount of sodium chloride will that equal?

F. $\dfrac{1}{13}$ ounces

G. $\dfrac{1}{16}$ ounces

H. $\dfrac{1}{18}$ ounces

J. $\dfrac{1}{15}$ ounces

7. A nickel is $\dfrac{1}{20}$ of a dollar. If Jose trades six dollar bills for an equal number of nickels, how many nickels will he get?

Record your answer and fill in the bubbles. Be sure to use the correct place values.

⓪	⓪	⓪	.	⓪	⓪
①	①	①		①	①
②	②	②		②	②
③	③	③		③	③
④	④	④		④	④
⑤	⑤	⑤		⑤	⑤
⑥	⑥	⑥		⑥	⑥
⑦	⑦	⑦		⑦	⑦
⑧	⑧	⑧		⑧	⑧
⑨	⑨	⑨		⑨	⑨

8. Sara trains puppies. She has $\frac{1}{3}$ of a bag of treats left over and will use an equal amount with 9 puppies. What fraction of the bag of treats will each puppy earn?

F. $\frac{1}{3}$

G. $\frac{1}{27}$

H. $\frac{1}{9}$

J. 27

9. One cup is $\frac{1}{16}$ of a gallon. If Tami and Timmy drink a total of 4 gallons of milk this week, how many cups will that equal?

A. 64 cups, because $4 \div \frac{1}{16} = 64$

B. 4 cups, because $16 \div 4 = 4$

C. $\frac{1}{4}$ cups, because $4 \times \frac{1}{16} = \frac{1}{4}$

D. $\frac{1}{64}$ cups, because $\frac{1}{16} \div 4 = \frac{1}{64}$

10. The blueprint for a city park is shown below.

- $\frac{1}{4}$ of the park will be a playground for young children.

- $\frac{1}{4}$ of the park will be a picnic area for families.

- $\frac{1}{2}$ of the park will be devoted to sports. It will include a basketball court, a tennis court, a volleyball court, and a swimming pool.
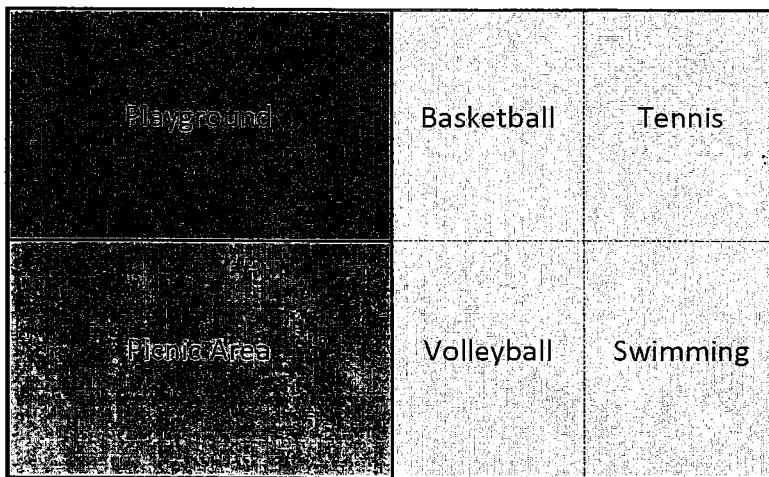
If the sports areas are equal in size, what fraction of the park is used for basketball?

F. $\frac{1}{3}$ G. $\frac{1}{4}$ H. $\frac{1}{8}$ J. $\frac{1}{10}$