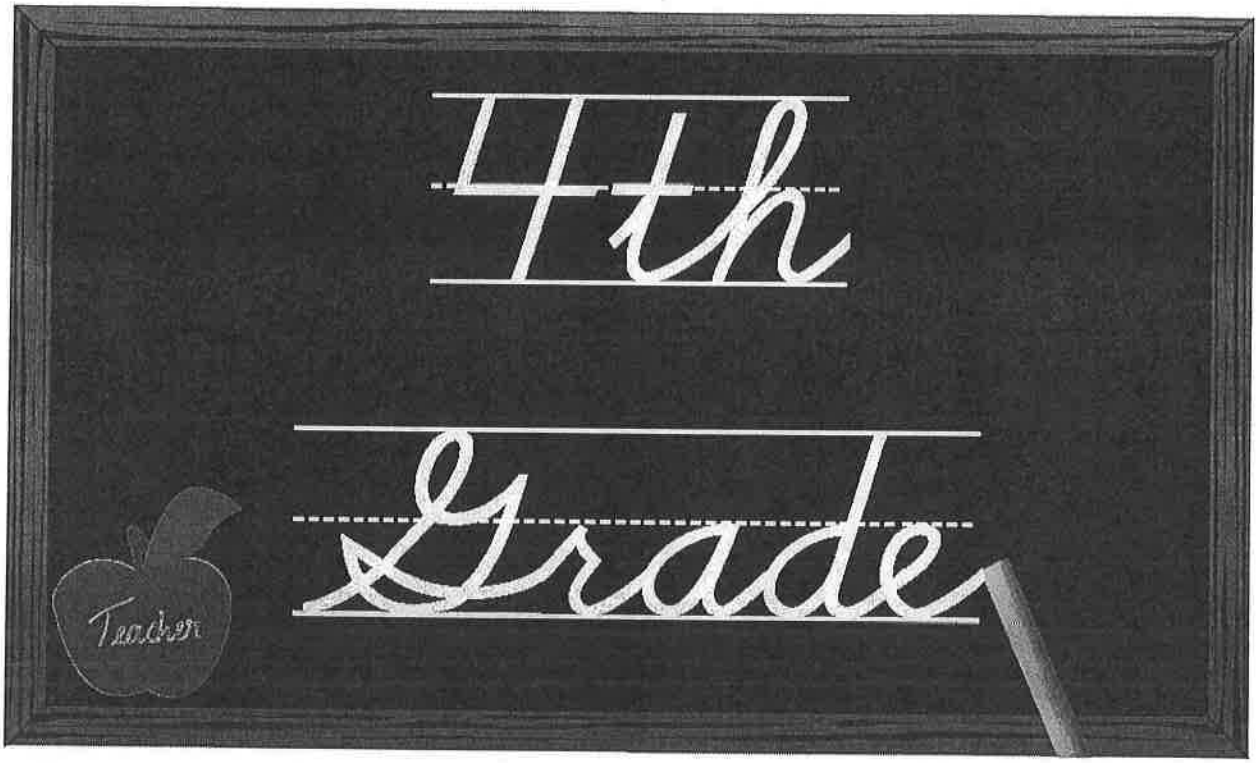


FOURTH GRADE LEARNING PACKET

Read the article "Pedal Power" before answering Numbers 1 through 10.

Pedal Power

Pedal! Pedal! Faster! Faster! What could be more fun than pedaling a bike? Did you know that the the first bicycles had no pedals? There were also no brakes! How do you suppose they stopped? Later, during the mid-1800s, bikes were built with pedals. One type of bike had a gigantic wheel at the front and one small wheel at the back. The rider sat on a seat above the front tire.

This bike was called a Penny-farthing because the tires reminded people of the British coins the penny and the farthing. It was also called a High Wheeler.

Roads today are smooth. In the past, roads were bumpy because they were made of stone, brick, or dirt. One early bicycle was called the boneshaker. It had a heavy frame and hard, wooden wheels. Imagine riding a bike with wooden wheels on a bumpy road. No wonder they called it the boneshaker!

Over time, bikes began to look like what we are used to seeing today. They had two rubber tires that were the same size. One tire was in the front and the other in the back. Riders sat on a seat near the middle of the bike where they could pedal to make the bike move.

Bikes today are lower to the ground than bikes of long ago. These modern bikes are also more comfortable. They are stronger and weigh less than bikes of the past. They are safer and go faster, too!

GO ON →

Have you ever wondered what makes a bike move? The pedals are attached to cranks. When the rider pedals, the cranks turn a sprocket. This wheel with metal teeth then pulls a chain that moves a gear. The gear turns the rear tire and the bike moves forward. This makes the front wheel turn. You could say that the energy created is called pedal power!

Although most bikes work in the same way, their parts can be different. For example, there are two kinds of pedals. Block pedals have rubber or plastic blocks that fit into a metal frame. Other pedals are all metal and have tiny teeth along the edges. The teeth keep feet from slipping off the pedals.

To stop a bike, foot or hand brakes are used. With foot brakes, the pedals are pushed backward to stop. With hand brakes, a lever on the handlebars is squeezed to make the bike stop.

While most bikes are used for fun, some have different purposes. Touring bikes have a light frame and thin tires. Most have ten or more speeds. These bikes are designed for taking long, relaxing bike trips. Racing bikes are even lighter than touring bikes. They have skinny tires and low handlebars. They are built to go fast and are used in long road races.

Dirt bikes are small and strong. They have long handlebars and unlike the touring bike, they have only one speed. Dirt bikes are made for racing on bumpy dirt tracks. Like the dirt bike, the mountain bike has a strong frame with thick, wide tires. These bikes are used on rugged roads that are rough and uneven.

Bikes all have the same basic parts, but they can be so different. Whichever kind of bike you ride, just keep on pedaling.

GO ON →

Name: _____ Date: _____

Now answer Numbers 1 through 10. Base your answers on "Pedal Power."

1 The author describes metal pedals in paragraph 2 on page 38 to

Ⓐ show the problems caused by this type of pedal.

Ⓑ explain how this type of pedal helps the rider.

Ⓒ show when this type of pedal was invented.

Ⓓ explain when pedals were first used.

2 Read this sentence from the article.

> **One type of bike had a gigantic wheel at the front and one small wheel at the back.**

Which word means almost the SAME as *gigantic*?

Ⓐ huge

Ⓑ small

Ⓒ type

Ⓓ wheel

3 Read the following sentences from the article.

> **Bikes today are lower to the ground than bikes of long ago. These modern bikes are also more comfortable.**

What does *modern* mean in the sentence above?

Ⓐ from today

Ⓑ from the past

Ⓒ from the future

Ⓓ from yesterday

Name: _____ Date: _____

4 How does the author help the reader understand how a bike works in paragraph 1 on page 38?

Ⓐ by comparing different types of bikes

Ⓑ by sequencing the steps to building a bike

Ⓒ by showing the problems caused by pedaling

Ⓓ by explaining what happens when a bike is pedaled

5 Read the following sentences from the article.

When the rider pedals, the cranks turn a sprocket. This wheel with metal teeth then pulls a chain that moves a gear.

What does *sprocket* mean in the sentence above?

Ⓐ a gear

Ⓑ a pedal

Ⓒ a crank that turns

Ⓓ a wheel with teeth

6 Read this sentence from the article.

Block pedals have rubber or plastic blocks that fit into a metal frame.

Which word means almost the SAME as *block* in the sentence above?

Ⓐ bendable

Ⓑ circle

Ⓒ metal

Ⓓ solid

GO ON →

Name: _____ Date: _____

7 The author includes details about the tires of dirt and mountain bikes to show

Ⓐ the effects of riding these bikes.

Ⓑ the problems of owning these bikes.

Ⓒ why the tires are skinny on these bikes.

Ⓓ the ways people use these types of bikes.

8 Read the following sentences from the article.

> **Like the dirt bike, the mountain bike has a strong frame with thick, wide tires. These bikes are used on rugged roads that are rough and uneven.**

What does *rugged* mean in the sentence above?

Ⓐ open and sunny

Ⓑ steep and smooth

Ⓒ rough and uneven

Ⓓ narrow and framed

9 What is the effect of the author providing the nickname of a bike in paragraph 2 on page 37?

Ⓐ It tells a funny story about bikes.

Ⓑ It shows what caused this bike to get its name.

Ⓒ It describes why this type of bike was popular.

Ⓓ It explains how bones were used to make the bike.

10 How does the author organize information about brakes in paragraph 3 on page 38?

Ⓐ by explaing how each type of brake works

Ⓑ by explaining the problems with hand brakes

Ⓒ by sequencing the steps for changing brakes

Ⓓ by telling what causes feet to slip off pedals

Read the article "Wind Power" before answering Numbers 11 through 20.

Wind Power

People have been using wind power for a very long time. Early windmills had simple uses. In China they were used to pump water. Later, windmills were used to grind grain and saw wood. The Dutch used windmills to drain lakes and marshes. Over time, new machines were invented to do these same tasks and windmills were used less and less.

Today, windmills have made a big comeback. Early windmills had four large sails that turned in the wind. Modern windmills, called turbines, usually have three blades. The blades are located at the top of a very tall tower. When the wind blows, it spins the blades on the turbine. The turning blades run a generator. This machine creates electrical energy. The more the wind blows, the longer the blades turn. As a result, this creates more electricity.

GO ON →

Wind turbines are often placed in groups called wind farms. These farms need to be built on certain sites where the wind blows frequently. Flat, open lands are good locations for wind farms. Many wind farms can be found in the Midwestern United States in the middle of farmland. They are also found in the deserts of the West and Southwest. Turbines are also located on the coasts of oceans and large lakes.

Land is not the only good location for wind farms. The wind is strong and steady over water. People are planning to build wind farms in the middle of the ocean.

There are many benefits to wind farms. But they do cause problems. Birds may be hurt if they fly into the spinning blades. Some people think the turbines are hideous. They believe the towers spoil the look of the land. Some people worry that tourists might stop coming to the beaches if wind farms are built near the ocean. This could cause local businesses to lose money. Others complain that the turbines hum noisily as they spin.

Using wind power to make electricity has many advantages. Wind is free and it will never run out. Also, wind farms do not create pollution. This makes wind power good for the environment.

Wind power is becoming more popular in the United States. Over half of the fifty states have wind turbines. California is one of the highest producers of wind power. One wind farm in California has thousands of wind turbines.

One thing is for sure, wind energy has been useful to people for a very long time. The next time you feel the wind blowing on your face, think about all of the things that energy could do for you!

GO ON →

Name: _____ Date: _____

Now answer Numbers 11 through 20. Base your answers on "Wind Power."

11 Why does the author begin the article with details about the history of windmills?

Ⓐ to show the different uses for windmills over time

Ⓑ to explain that windmills are making a comeback

Ⓒ to show that windmills are a new technology

Ⓓ to tell why we should protect wind farms

12 Read the following sentences from the article.

> **The turning blades run a generator. This machine creates electrical energy.**

A *generator* is a machine that turns

Ⓐ blades on a turbine.

Ⓑ wind power into pollution.

Ⓒ electrical power into wind power.

Ⓓ wind power into electrical power.

13 How does the author organize paragraph 1 on page 43?

Ⓐ by sequencing the location of wind farms

Ⓑ by telling how location affects wind farms

Ⓒ by comparing wind energy with other forms

Ⓓ by discussing the problems with wind farms

GO ON →

Name: _____ Date: _____

14 Read the following sentences from the article.

These farms need to be built on certain sites where the wind blows frequently. Flat, open lands are good locations for wind farms.

What does *sites* mean in the sentences above?

Ⓐ groups
Ⓑ numbers
Ⓒ places
Ⓓ states

15 Read this sentence from the article.

Others complain that the turbines hum noisily as they spin.

Which word means almost the SAME as *hum* in the sentence above?

Ⓐ buzz
Ⓑ ring
Ⓒ sing
Ⓓ whisper

16 How does the author help the reader understand the importance of wind farms?

Ⓐ by explaining the problem with mountain wind farms
Ⓑ by sequencing the steps to building a wind farm
Ⓒ by comparing the best sites for wind farms
Ⓓ by explaining the effects of wind farms

17 How does the author organize paragraph 3 on page 43?

Ⓐ by showing problems caused by wind farms
Ⓑ by sequencing the way wind farms work
Ⓒ by telling where wind farms are built
Ⓓ by describing wind farm benefits

Name: _____ Date: _____

18 Read the following sentences from the article.

Some people think the turbines are hideous. They believe the towers spoil the look of the land.

What does *hideous* mean in the sentences above?

Ⓐ beautiful

Ⓑ plain

Ⓒ special

Ⓓ ugly

19 Read the following sentences from the article.

Using wind power to make electricity has many advantages. Wind is free and it will never run out.

What does *advantages* mean in the sentences above?

Ⓐ benefits

Ⓑ chores

Ⓒ problems

Ⓓ uses

20 How does the author explain the advantages of wind power?

Ⓐ by showing where wind farms are located

Ⓑ by telling the positive effects of wind power

Ⓒ by comparing wind to other forms of energy

Ⓓ by sequencing the development of wind farms

STOP

ANSWER KEY: Reading Assessment Wonders Passage Set

Q1:B
PTS:1
Q2:A
PTS:1
Q3:A
PTS:1
Q4:D
PTS:1
Q5:D
PTS:1
Q6:D
PTS:1
Q7:D
PTS:1
Q8:C
PTS:1
Q9:B
PTS:1
Q10:A
PTS:1
Q11:A
PTS:1
Q12:D
PTS:1
Q13:B
PTS:1
Q14:C
PTS:1
Q15:A
PTS:1
Q16:D
PTS:1
Q17:A
PTS:1
Q18:D
PTS:1
Q19:A
PTS:1
Q20:B
PTS:1

Use the information given to answer questions 6-7.

A two-day activity involves putting students into groups of 7 on the first day and groups of 5 on the second day. On both days, each group is given 56 crayons to share equally among themselves.

Part A

6. The first day, each student puts 3 crayons aside and uses the rest. How many crayons does each student use on the first day?

A 4 crayons

B 5 crayons

C 6 crayons

D 10 crayons

Part B

7. The second day, 56 crayons are divided equally among the 5 students in each group. After dividing, how many crayons are left over in each group on the second day?

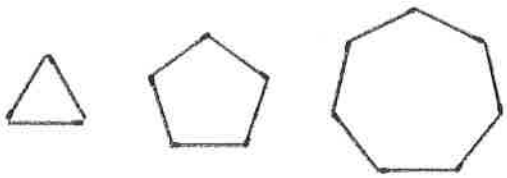
A 6 crayons

B 2 crayons

C 1 crayon

D 0 crayons

8. Tara generates a shape pattern using matchsticks, as shown.



How many matchsticks does Tara need to create the fifth shape of the pattern?

A 9 matchsticks

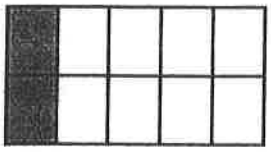
B 11 matchsticks

C 13 matchsticks

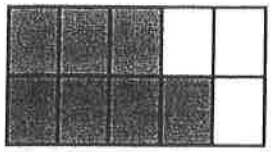
D 25 matchsticks

9. The shaded portion of which area model represents $\frac{2}{5}$?

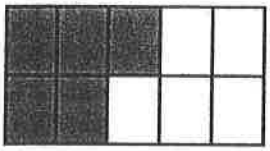
A



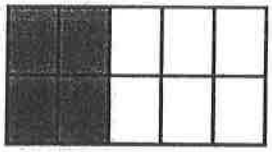
B



C



D



10. Which *two* are equal to 5,329?

A	5 hundreds + 329 ones
B	5 thousands + 329 ones
C	53 hundreds + 29 ones
D	53 hundreds + 29 tens
E	53 thousands + 29 ones
F	53 thousands + 29 tens

11. Steve has 16 yellow marbles, 46 blue marbles, 27 green marbles, and some red marbles. If he has 120 marbles in all, which equation can be used to find the number of red marbles (★) Steve has?

A ★ + 16 + 46 + 27 = 120

B 16 + 46 + 27 − 120 = ★

C 120 + ★ − 16 − 46 − 27 = 0

D 120 − ★ + 16 + 46 + 27 = 0

12. Which pattern follows the rule "start with 3, add 7"?

A 3, 7, 10, 17, 20, 27, 30

B 3, 10, 17, 24, 31, 38, 45

C 7, 10, 13, 16, 19, 22, 25

D 7, 10, 17, 24, 31, 38, 45

13. Ana has two ribbon rolls of the same length in red and green. She uses $\frac{3}{8}$ of the red roll and $\frac{6}{10}$ of the green roll to wrap a present.

Of which ribbon does Ana use more, and why?

A Ana uses more of the green ribbon because 6 > 3.

B Ana uses more of the green ribbon because $\frac{6}{10} > \frac{1}{2}$ and $\frac{3}{8} < \frac{1}{2}$, so $\frac{3}{8} < \frac{6}{10}$.

C Ana uses more of the red ribbon because 10 − 6 < 8 − 3.

D Ana uses more of the red ribbon because $\frac{6}{10} < \frac{1}{2}$ and $\frac{3}{8} > \frac{1}{2}$, so $\frac{3}{8} > \frac{6}{10}$.

14. Which statement *correctly* describes the equation $5 \times 8 = 40$?

A 5 less than 8 is 40.

B 40 is 8 more than 5.

C 40 is 8 times as many as 5.

D 5 is 8 times as many as 40.

15. Lila and Leon represent the fraction $\frac{5}{6}$ using the methods shown in the table.

Lila	$\frac{5}{6} = \frac{4}{6} + \frac{1}{6}$
Leon	$\frac{5}{6} = \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$

Who represents the fraction *correctly*?

A both Lila and Leon

B only Lila

C only Leon

D neither Lila nor Leon

16. A pattern of shapes begins with a shape that has 4 points and adds 3 more points to create the next shape, as shown.

How many points will the 6th shape in the pattern have?

A 12 points

B 16 points

C 19 points

D 24 points

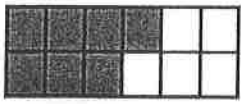
Consider the comparisons in the table to answer questions 17-18.

Comparison 1	$s = \frac{1}{2}$
Comparison 2	$t < \frac{2}{6}$

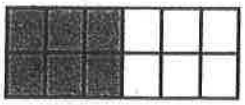
Part A

17. Which model represents a fraction that can replace s and make Comparison 1 true?

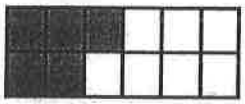
A



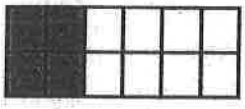
B



C



D



Part B

18. Which fraction can replace t and make Comparison 2 true?

A $\frac{2}{8}$

B $\frac{2}{4}$

C $\frac{2}{3}$

D $\frac{2}{2}$

Go to the next page

19. Which expression is equal to 248 ÷ 8?

A $(200 \div 8) - (40 \div 8)$

B $(240 \div 8) - (8 \div 8)$

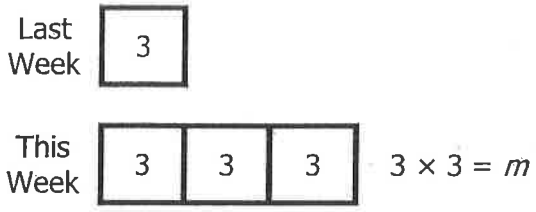
C $(200 \div 8) + (40 \div 8)$

D $(240 \div 8) + (8 \div 8)$

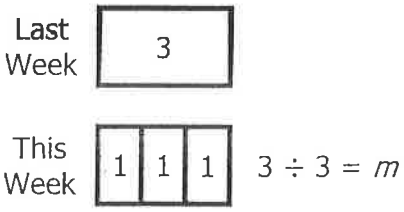
20. Jayden ran 3 miles last week. This week, Jayden ran 3 times as many miles as he ran last week.

Which figure represents the number of miles (m) Jayden ran this week?

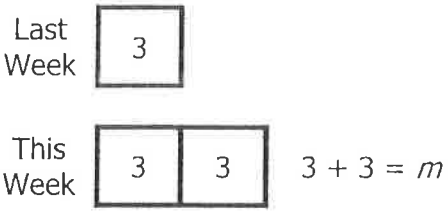
A



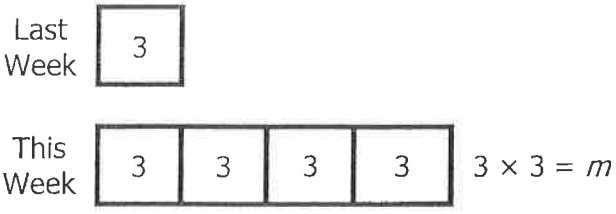
B



C



D



Go to the next page

21. Kirstin spends $1\frac{2}{5}$ hours mowing the lawn and $\frac{4}{5}$ hour watering her garden. How much more time does Kirstin spend mowing the lawn than watering the garden?

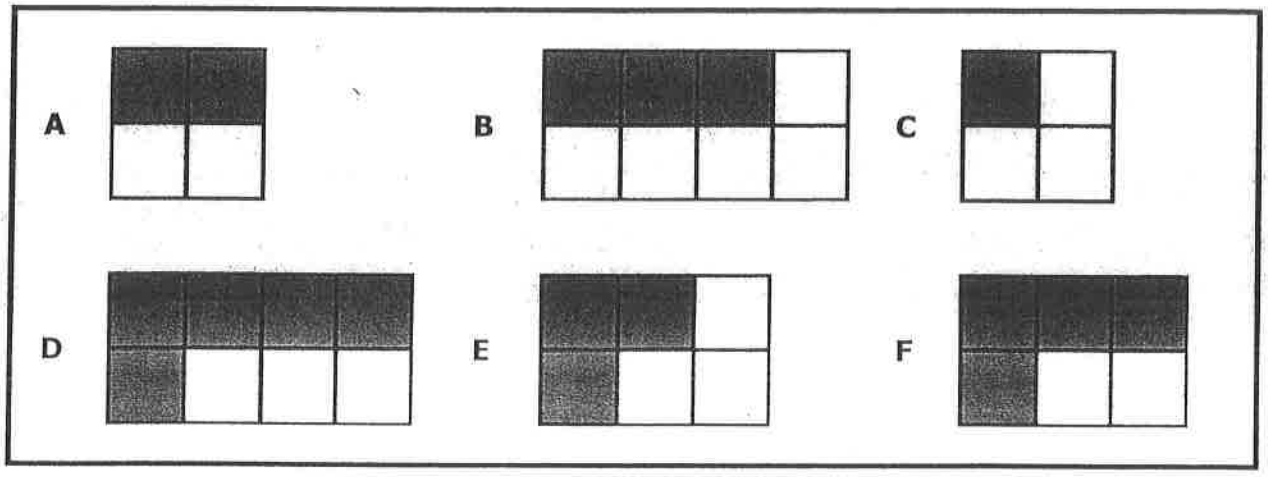
A $\frac{2}{5}$ hour

B $\frac{3}{5}$ hour

C $1\frac{2}{5}$ hours

D $2\frac{1}{5}$ hours

22. Which *<u>two</u>* fraction models have a shaded area equal to $\frac{1}{2}$?



23. Which expression compares $\frac{2}{6}$ and $\frac{8}{12}$ *correctly* using a common denominator?

A $\frac{2}{6} > \frac{8}{6}$

B $\frac{2}{6} < \frac{8}{6}$

C $\frac{4}{12} > \frac{8}{12}$

D $\frac{4}{12} < \frac{8}{12}$

24. The table shows how far a group of students jumps in gym class.

Name	Antonio	Cole	Ruth	Vanessa
Distance Jumped (yards)	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{2}{6}$

Which statement is true?

A Antonio jumps farther than Cole.

B Antonio jumps farther than Ruth.

C Vanessa jumps farther than Antonio.

D Vanessa jumps farther than Cole.

25. Which is a factor pair of 32?

A 3 and 2

B 2 and 8

C 3 and 4

D 4 and 8

26. Barry completed a math assignment in five days. On each of the first four days, he solved 24 questions. On the fifth day, he solved 4 questions.

Which equation can be used to find the total number of questions in the assignment, t?

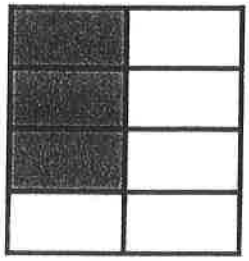
A $24 + 4 = t$

B $24 \times 4 = t$

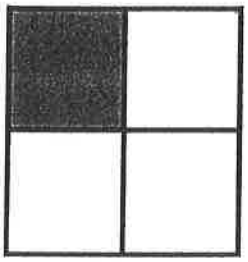
C $24 + 4 \times 4 = t$

D $24 \times 4 + 4 = t$

27. The shaded region in each grid represents a fraction of that grid.



Grid 1



Grid 2

Which statement comparing the shaded region in each grid is correct?

A As both grids are the same size, $\frac{3}{8}$ of Grid 1 is the same as $\frac{1}{4}$ of Grid 2.

B As Grid 1 has a larger shaded portion, $\frac{3}{8}$ of Grid 1 is larger than $\frac{1}{4}$ of Grid 2.

C As Grid 1 has fewer shaded squares, $\frac{3}{8}$ of Grid 1 is smaller than $\frac{1}{4}$ of Grid 2.

D As the size of the squares is different, $\frac{3}{8}$ of Grid 1 cannot be compared with $\frac{1}{4}$ of Grid 2.

28. Andy paints $\frac{2}{8}$ of a wall, and Margaret paints $\frac{5}{8}$ of the same wall. How much more of the wall does Margaret paint than Andy?

A $\frac{1}{8}$

B $\frac{3}{8}$

C $\frac{4}{8}$

D $\frac{7}{8}$

29. A pattern is generated using the rule "start with the number 2, and add 5." Which statement about the numbers in the pattern is correct?

A The numbers in the pattern are multiples of 2.

B The numbers in the pattern are multiples of 5.

C The ones digits of the numbers in the pattern alternate between 2 and 5.

D The ones digits of the numbers in the pattern alternate between 2 and 7.

30. Which expression can be used to calculate the value of $8\frac{3}{8} - 4\frac{5}{8}$?

A $\frac{11}{8} - \frac{9}{8}$

B $\frac{24}{8} - \frac{20}{8}$

C $\frac{37}{8} - \frac{67}{8}$

D $\frac{67}{8} - \frac{37}{8}$

31. Molly writes down a number that is 10 times more than 72. Which is the number Molly writes down?

A 62

B 82

C 720

D 1,720

32. Darrell has a collection of 120 coins. Darrell knows that he has 22 dimes and 48 nickels, and the rest are quarters.

Which equation can be used to find the number of quarters (q) Darrell has?

A $22 + 48 + 120 = q$

B $22 + 48 - 120 = q$

C $22 + 48 + q = 120$

D $22 + 48 - q = 120$

33. Ella is baking cookies. She adds $\frac{2}{4}$ cup of chocolate chips to her recipe. Ella also adds $\frac{1}{4}$ cup of chopped walnuts to her recipe.

What is the total amount of chocolate chips and chopped walnuts added to Ella's cookies?

A $\frac{1}{4}$ cup

B $\frac{2}{8}$ cup

C $\frac{3}{8}$ cup

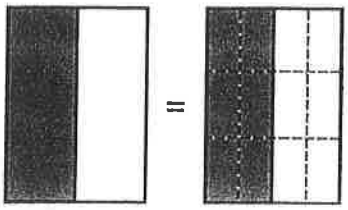
D $\frac{3}{4}$ cup

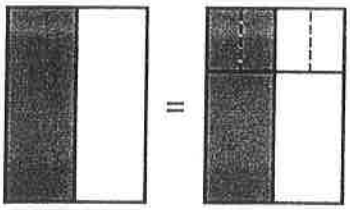
34. Which *two* expressions are equal to 6,675?

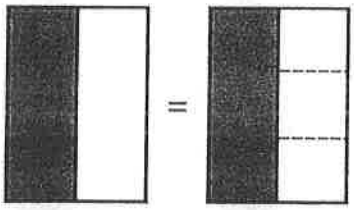
A	B	C	D	E
79×84	75×89	72×75	$5 \times 1{,}335$	$4 \times 1{,}668$

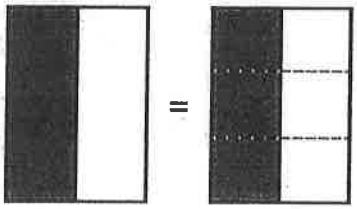
Go to the next page

35. Which fraction model *best* explains why $\frac{1}{2} = \frac{1 \times 6}{2 \times 6} = \frac{6}{12}$?

A 

B 

C 

D 

STOP. END OF MATH TEST.

Key:

1) B
2) A
3) C
4) D
5) C
6) B
7) C
8) B
9) D
10) B/C
11) A
12) B
13) B
14) C
15) A
16) C
17) B
18) A
19) D
20) A
21) B
22) A/E
23) D
24) A
25) D
26) D
27) B
28) B
29) D
30) D
31) C
32) C
33) D
34) B/D
35) A