

UNIT 4 REVIEW

**Ratios, Rates,
Proportions,
and Percent**

THIS IS ...

Jeopardy

WITH Your

Host...

Mrs. McGuire



JEEPARITY



Proportion

Unit Rate

Ratio

Percent

**Percents
& Tables**

**Ratio
Measures**

100

100

100

100

100

100

200

200

200

200

200

200

300

300

300

300

300

300

400

400

400

400

400

400

500

500

500

500

500

500

Joel and Annie buy oranges at the same store. Joel buys 12 oranges for \$8. Annie buys 15 oranges. What is the total cost of Annie's oranges in dollars?

Explain your answer.



\$10

Sam has 21 items of clothing in his closet. The clothing is pants and shirts. The ratio of pants to shirts is 2 to 5. Use a diagram to show how many pants and shirts he has in his closet.



6 pants and 15 shirts

A cake recipe calls for 6 cups of flour and 4 cups of sugar. Which of the following has the same ratio of flour to sugar? (Is there more than one right answer?)

- a. 24 cups of flour and 16 cups of sugar
- b. 5 cups of flour and 3 cups of sugar
- c. 3 cups of flour and 2 cups of sugar
- d. 24 cups of flour and 12 cups of sugar



a. 24 cups of flour and 16 cups of sugar

and

c. 3 cups of flour and 2 cups of sugar

When cooking pasta, the water to pasta ratio is 3:1. Using this ratio, which statement is true?

- a. When cooking 3 cups of pasta, 9 cups of water are needed
- b. When cooking 6 cups of pasta, 3 cups of water are needed
- c. When cooking 12 cups of pasta, 4 cups of water are needed
- d. When cooking 24 cups of pasta, 8 cups of water are needed

Justify your answer.



- a. When cooking 3 cups of pasta, 9 cups of water are needed.

Proportions need to be in the correct order.

The McGuire family is on a road trip. They have already driven 372 miles in 6 hours. They need to travel 310 more miles to get to their destination. If they continue driving at the same speed, how much longer will it take for them to reach their destination?



5 hours



8 carrots cost \$1.20

What is the unit price?



\$ 0.15

Give the unit rate in each situation.

We drove 120 miles in 3 hours.

The unit rate was miles per hour.

Carol worked 5 hours and earned \$95.

She earned \$ per hour.

Sara answered 195 math questions in 15 minutes,
Which is a rate of math questions per minute.



40 miles per hour

\$19 per hour

13 problems per minute

Which statement involving rate is incorrect?

Cami paid \$35 for 5 cd's, which is a rate of \$7 per cd.

Eli drove 175 miles in 7 hours, which is a rate of 25 mph.

Rob mowed 42 lawns in one week, which is a rate of 7 lawns per day.

Hope paid \$ 20.50 for 5 shirts, which is a rate of \$4.10 per shirt.



Rob mowed 42 lawns in one week,
which is a rate of 7 lawns per day.

The rate is actually 6 lawns per day.

Which is the fastest rate?

4 questions answered in 3 minutes

9 questions answered in 7 minutes

13 questions answered in 15 minutes

30 questions answered in 25 minutes



4 questions answered in 3 minutes

Which is the better buy?

12 tickets for \$4.68

or

10 tickets for \$4.50



12 tickets for \$4.68

In a class there are 16 boys and 5 girls. What is the ratio of girls to boys in the class?

5 to 16

5 to 21

16 to 5

21 to 16



5 to 16

A bag contains 14 red marbles and 26 white marbles.
What is the ratio of white marbles to red marbles?

14 to 40

40 to 14

14 to 26

26 to 14

26 to 40

40 to 26



26 to 14

For every 4 girls in the class, there are 3 boys. The ratio of girls to boys is _____.

For every 3 cups of flour in the recipe, there is 1 cup of sugar. The ratio of sugar to flour is _____.

For every 2 hours Meg studied math, she studied science for 3 hours. The ratio of science to math study hours is _____.



girls:boys is 4:3

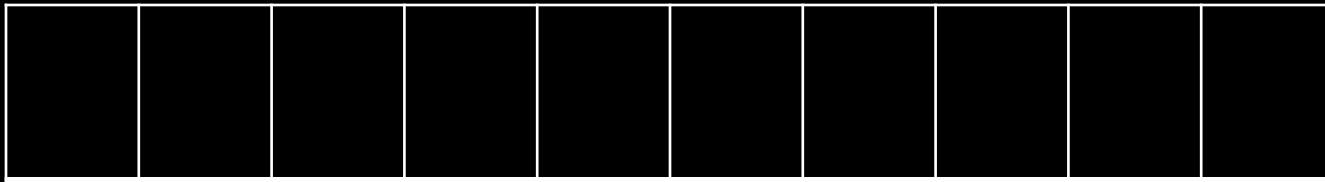
sugar:flour is 1:3

science:math is 3:2



DAILY
Place A Wager
DOUBLE

Show the ratio of shaded to unshaded rectangles as 3:2



Give the percentage of the model that is unshaded.



Unshaded = 40%

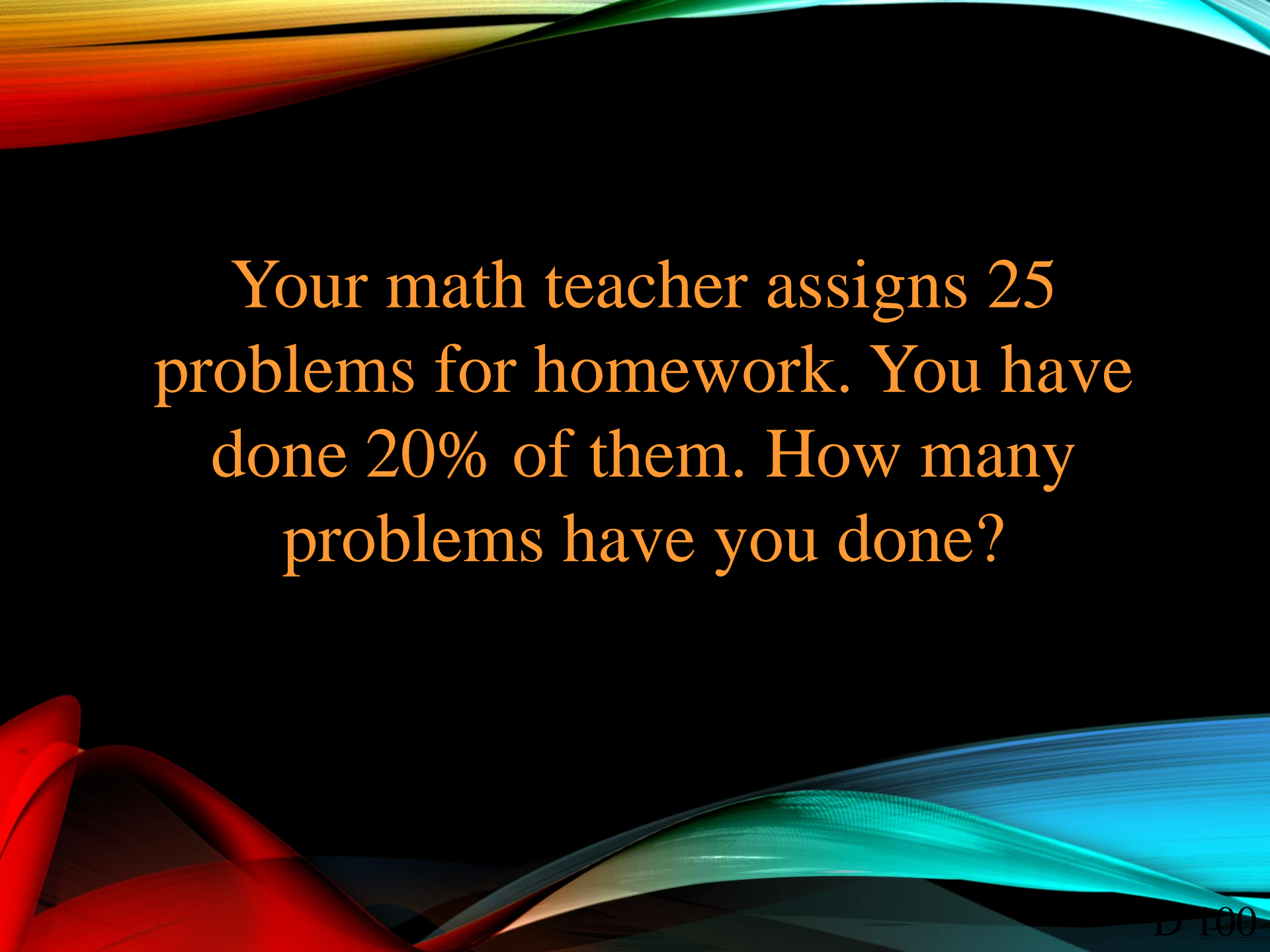
Sean has a set of colored pencils and markers. For every 4 markers there are 5 colored pencils. His set has room for 72 pencils or markers. How many markers does he have? How many colored pencils does he have? Use ratios to show your answer is correct.



Markers = 32

Pencils = 40

4:5:9 equal ratio 32:40:72



Your math teacher assigns 25 problems for homework. You have done 20% of them. How many problems have you done?



20% of 25 = 5 problems

Kate bought a pair of jeans for \$21, which was 75% of the original price. What did the jeans originally cost?



\$28

At Adam's school, 20% of the 140 students take the bus.

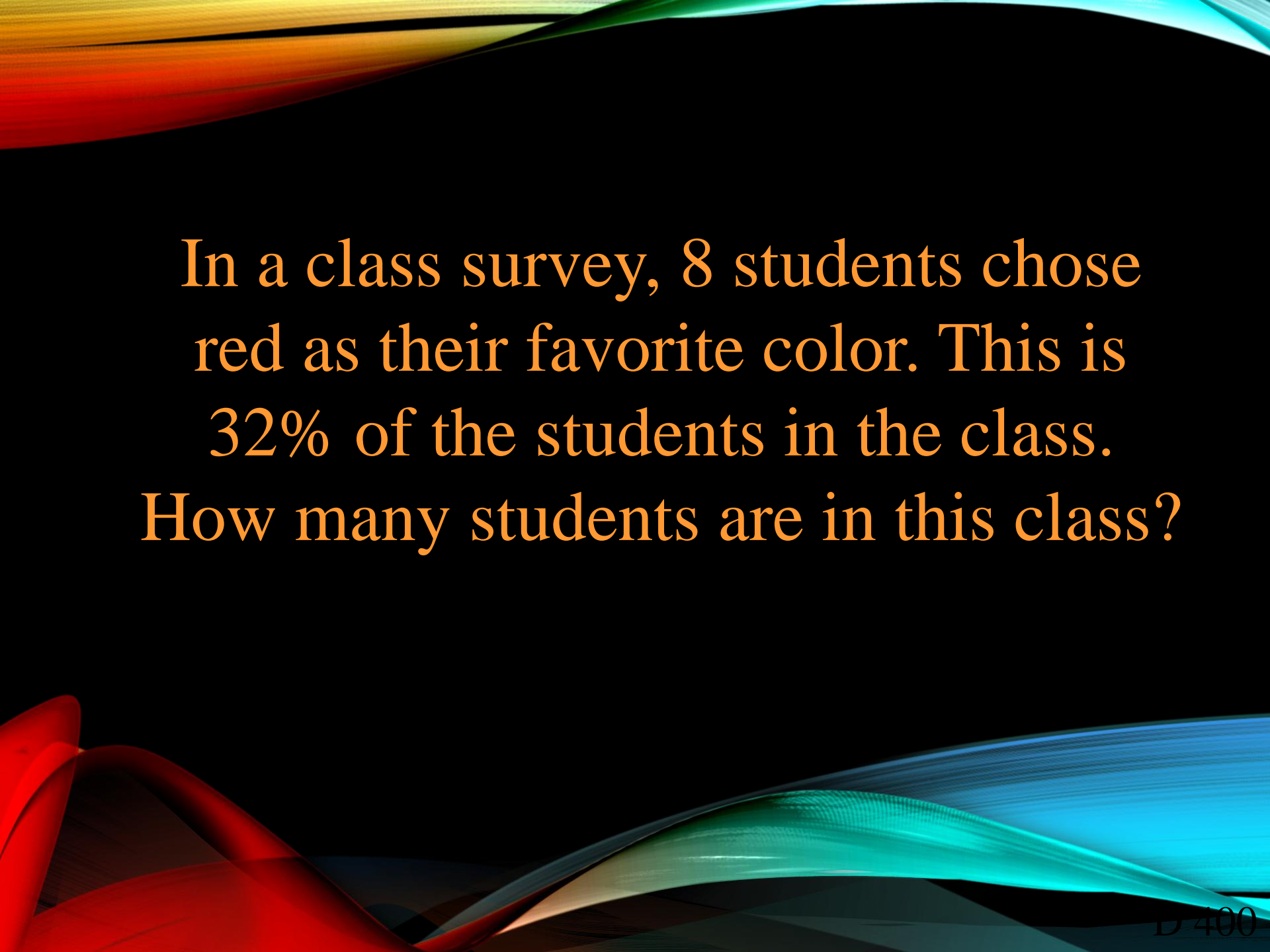
Create an expression that represents the percentage.

$$\frac{\square}{\square} \times \square$$

There are _____ students who take the bus to school.



28 students ride the bus.



In a class survey, 8 students chose red as their favorite color. This is 32% of the students in the class. How many students are in this class?



25 students are in the class.

Alexis paid \$2000 in taxes,
which was 25% of her yearly
income. What was her yearly
income?



\$8000

A table with x-values and y-values is shown. Place one number in each empty space so the ratio of x to y is equivalent for each pair of x and y values.

x	y
2	6
	9
4	12
	18
10	



x	y
2	6
3	9
4	12
6	18
10	30

Jen's bakery sells muffins. Her recipe for a batch of muffins calls for 4 eggs and 5 cups of flour. The bakery makes different-sized batches of muffins, so Jen made this ratio table to help his bakers. Place one digit in each box to complete the ratio table Jen started.

Eggs	Flour
4	5
2	
8	
	30



Eggs	Flour
4	5
2	2.5
8	10
24	30

Christa is at school every day for 6 hours.
John goes to school every day for 12 hours.
Hal goes to school every day for 8 hours.
What percent of a 24 hour day does each
person go to school.

Use a table to show your answers.



Person	Hours	Percent
Christa	6	25%
John	12	50%
Hal	8	33%

Jonathan takes a math quiz
and gets 45 out of 60
questions correct. What
percentage of the questions
did he get incorrect?



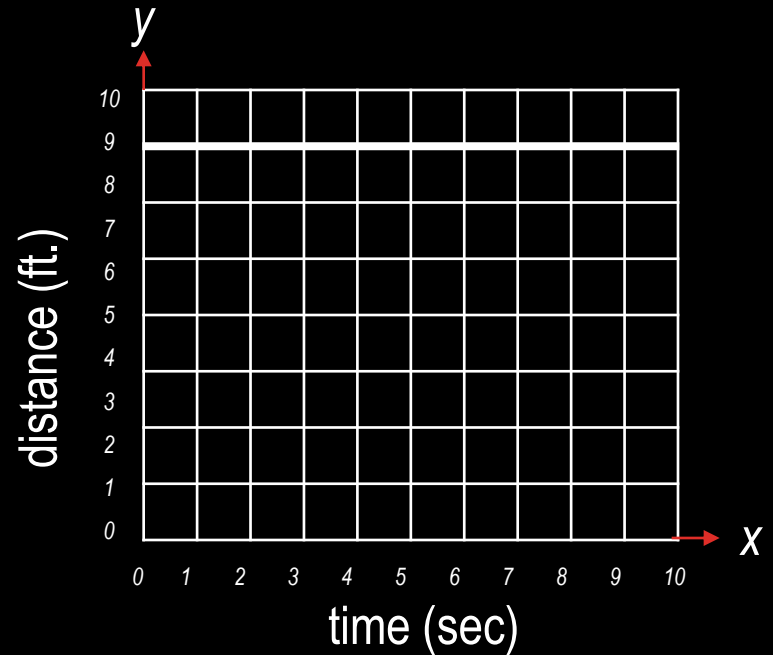
25%

While marching with the band, Alex takes 2 steps every second. Each step is 1 foot long.

Graph points on the coordinate plane to represent his steps starting at 0 seconds and ending at 10 seconds.

How many seconds will it take Alex to travel 6 feet?

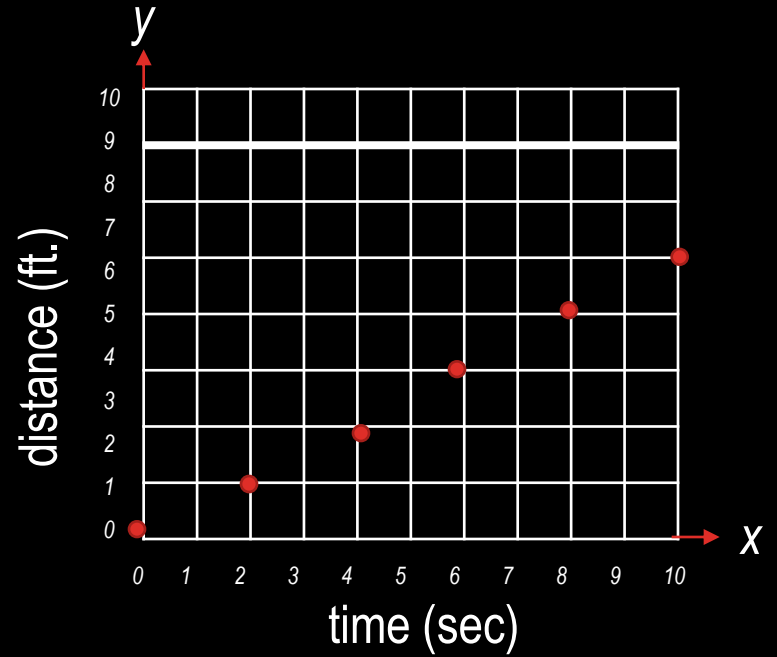
How many feet will he travel in 8 seconds?





10 seconds to
travel 6 feet

5 feet in 8
seconds





There are 16 oz. in a pound.

How many pounds are
equivalent to 12 oz.?



$\frac{3}{4}$ or .75 oz.

Ryan has 2 boards measuring 8 feet each. He needs to cut pieces that are 22 inches long for shelves. What is the greatest number of 22 inch pieces he can cut from 2 boards?



8 pieces

$$8 \text{ ft} \times 12 = 96 \text{ inches}$$

$$96 \text{ inches} \div 22 = 4.36 \text{ (4 pieces)}$$

$$2 \text{ boards} \times 4 \text{ pieces} = 8 \text{ pieces}$$



There are 3 teaspoons in a tablespoon
and 12 teaspoons in a quarter cup.

How many tablespoons are in 3
quarter cups?



12 T in $\frac{3}{4}$ cup

$$3 \text{ t/1T} = 12 \text{ t/4 T}$$

So 4 T in 1 quarter cup.

8 T in 3 quarter cups.

A 6 quart container of
applesauce costs \$13.20

What is the price per cup?

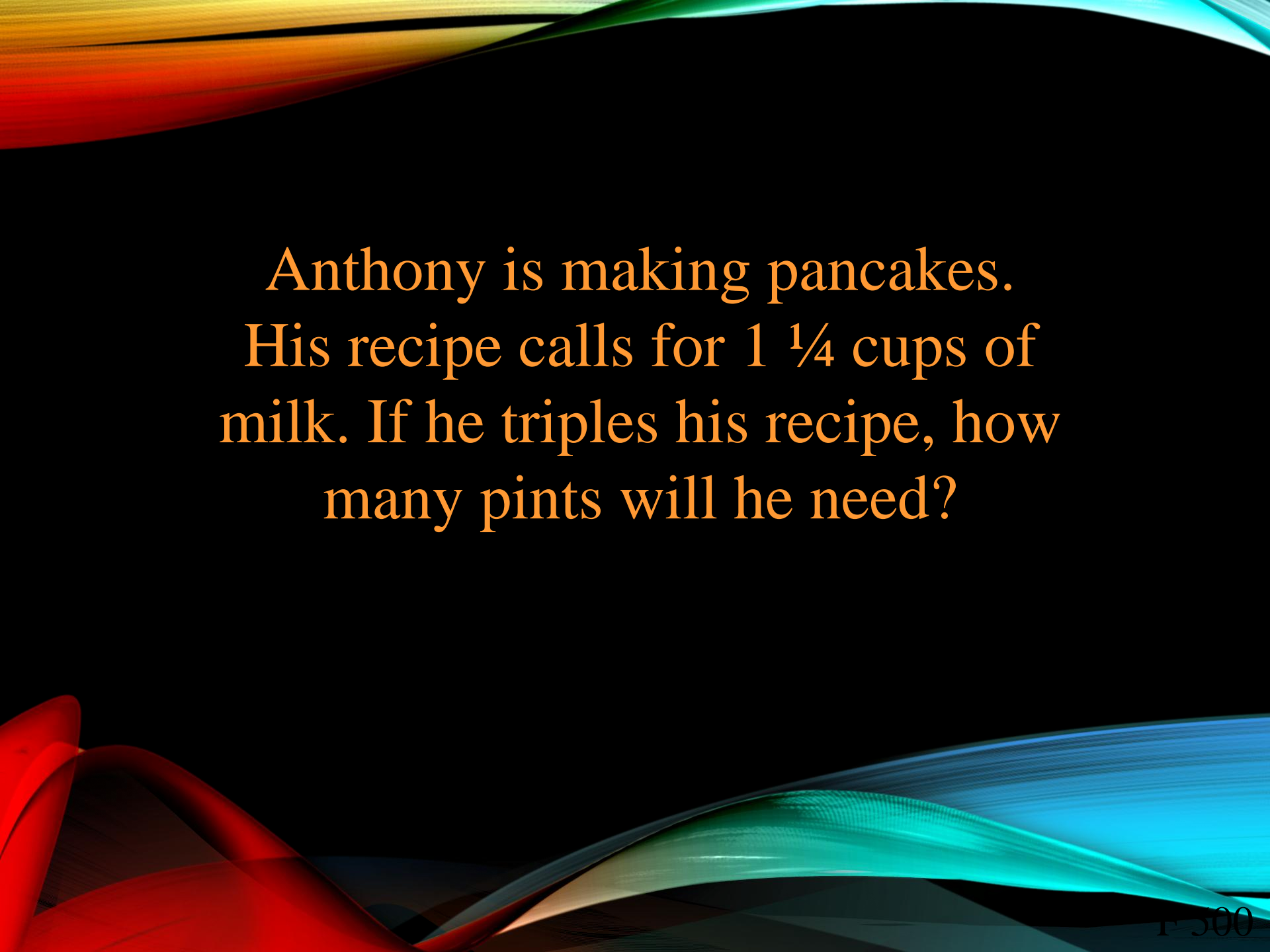


\$ 0.55

(4 cups in a quart)

$6 \times 4 = 24$ cups in all

$\$13.20 \div 24 = \$ 0.55$



Anthony is making pancakes.
His recipe calls for $1\frac{1}{4}$ cups of
milk. If he triples his recipe, how
many pints will he need?

$1 \frac{7}{8}$ pints

$$1 \text{ pint} / 2 \text{ cups} = n \text{ pints} / \frac{5}{4} \text{ cups}$$

$$\frac{5}{4} \div 2 = \frac{5}{8}$$

$$\frac{5}{8} \times 3 = \frac{15}{8} \text{ or } 1 \frac{7}{8}$$



The Final Jeopardy Category is:

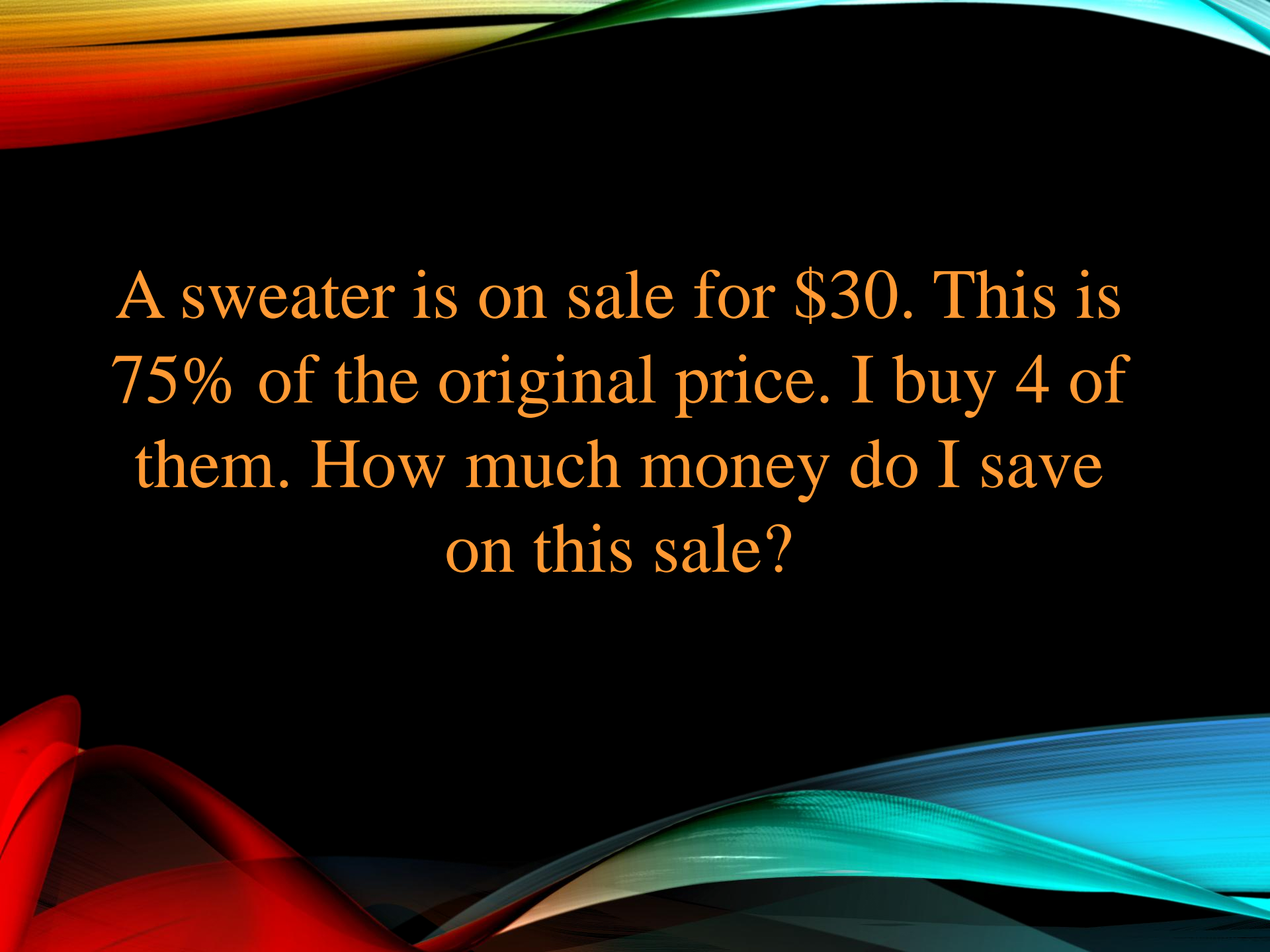
Percent

Please record your wager

Click on screen to begin

Final Jeopardy

Make your wager



A sweater is on sale for \$30. This is 75% of the original price. I buy 4 of them. How much money do I save on this sale?

\$40

Original price = \$40 4 x \$40 = \$160

Sale price = \$30 4 x \$30 = \$120

Savings = \$160 - \$120 = \$40

Click on screen to continue

Thank you for playing...

Jeopardy

Game Designed By C. Harr-MAIT