

## شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية



## حل أوراق عمل مراجعة وفق الهيكل الوزاري ريفيل

[موقع المناهج](#) ← [المناهج الإماراتية](#) ← [الصف السادس](#) ← [رياضيات](#) ← [الفصل الأول](#) ← [الملف](#)

تاريخ نشر الملف على موقع المناهج: 15:25:27 2023-12-03

## التواصل الاجتماعي بحسب الصف السادس



## روابط مواد الصف السادس على تلغرام

[الرياضيات](#)

[اللغة الانجليزية](#)

[اللغة العربية](#)

[التربية الاسلامية](#)

## المزيد من الملفات بحسب الصف السادس والمادة رياضيات في الفصل الأول

[حل مراجعة امتحانية وفق الهيكل الوزاري ريفيل](#)

1

[مراجعة امتحانية وفق الهيكل الوزاري ريفيل](#)

2

[حل تجميعية أسئلة وفق الهيكل الوزاري ريفيل](#)

3

[تجميعية أسئلة وفق الهيكل الوزاري ريفيل](#)

4

[حل تجميعية أسئلة اختبارية وفق الهيكل الوزاري](#)

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مؤسسة الإمارات للتعليم المدرسي  
EMIRATES SCHOOLS ESTABLISHMENT

United Arab Emirates  
Ministry of Education



الإمارات العربية المتحدة  
وزارة التربية والتعليم

# EoT1 Exam Coverage and Revision Sheet

## Grade 6, 2023-2024

# Mathematics

Academic Year	2023/2024
العام الدراسي	
Terms	1
الفصل	
Subject	Mathematics/Revision
المادة	الرياضيات/مراجعة
Grade	6
الصف	
Streams	General
المنهج	
Number of MCQ	15
عدد الأسئلة الموضوعية	
Marks of MCQ	4
درجة الأسئلة الموضوعية	
Number of FRQ	6
عدد الأسئلة المقالية	
Marks per FRQ	(6-3)
الدرجات للأسئلة المقالية	
Type of All Questions	MCQ/ الموضوعية FRQ/ المقالية
نوع الأسئلة	
Maximum Overall Grade	100
الدرجة القصوى الممكنة	
Exam Duration - مدة الامتحان	150 minutes
طريقة التطبيق - Mode of Implementation	Paper-Based
الآلة الحاسبة - Calculator	Not Allowed
الآلة الحاسبة	غير مسموحة

Question*	Learning Outcome/Performance Criteria**	Reference(s) in the Student Book (English Version)	
		Example/Exercise	Page
السؤال*	نتائج التعلم/معايير الأداء**	مثال/تمرين	الصفحة
1	Show a ratio relationship between two quantities using different representations	(1-6)	11
2	Show a ratio relationship between two quantities using tables of equivalent ratios and double number lines	EX 1-3	(12-17)
3	Solve real-world problems involving ratio relationships by using bar diagrams, double number lines, and equivalent ratios	(1-6)	45
4	Use ratio reasoning to convert between customary units of measurement	(1-8)	55
5	Use ratio and rate reasoning to find a unit rate	(1-7)	63
6	Model percents using 10×10 grids and bar diagrams	(1-7)	83
7	Use 10×10 grids and bar diagrams to represent percents greater than 100% or less than 1%	(1-6)	91
8	Relate fractions, decimals, and percents by using place-value reasoning and understanding a percent as a ratio that compares a number to 100	(1-9)	101
9	Find the percent of a number by reasoning about percent as a rate per 100 and by using bar diagrams,	(1-8)	111
10	Solve problems by using the standard algorithms for addition, subtraction, multiplication, and division to compute with multi-digit decimals	(1-8)	153

الأسئلة الموضوعية - MCQ

	11	Apply prior knowledge about multiplication, division, and operations on multi-digit numbers to divide whole numbers by fractions	(4-9)	165	
	12	Apply prior knowledge about multiplication and division by fractions to divide fractions by fractions	(1-6)	175	
	13	Use a number line to visually represent quantities in everyday life	(7-12)	197	
	14	order rational numbers	(5-8)	223	
	15	Graph rational numbers in the coordinate plane	(1-6)	235	
	الأستاذة الجليلة - QAD	16	Represent a collection of equivalent ratios as ordered pairs Graph a ratio relationship on the coordinate plane	(1-4)	27-28
		17	Compare ratio relationships that are shown using different representations	(1-5)	35-36
18		Estimate the percent of a number by using benchmark percents and rounding	(7-10)	119	
19		Use the standard algorithm to divide multi-digit numbers when solving problems	(1-6)	141	
20		Order rational numbers	(9-12)	223	
21		Graph rational numbers in the coordinate plane	(1-14)	235	
*		Questions might appear in a different order in the actual exam.			
*	قد تظهر الأسئلة بترتيب مختلف في الامتحان الفعلي.				
**	As it appears in the textbook, LMS, and (Main_IP).				
**	كما وردت في كتاب الطالب وLMS والخطة الفصلية .				

1. In Suri's coin purse, she has 6 dimes and 4 quarters. Martha has 5 dimes and 3 quarters. Suri thinks that the ratio of dimes to quarters in both purses is the same because they each have 2 more quarters than dimes. Is the same ratio of dimes to quarters maintained? Justify your response.

Suri's Ratio is  $\longrightarrow$  6:4

Martha Ratio is  $\longrightarrow$  5:3

No not the same

2. In a trivia game, Levi answered 8 questions correctly out of 10 turns in the game. He then answered the next three questions correctly. He reasoned that because he added 3 to both the total questions and his correct responses, that the ratio of correct answers to total questions remained the same. Is he correct? Justify your response.

Original Ratio was  $\longrightarrow$  8:10

New Ratio is

$$\begin{array}{r} 8 + 3 = 11 \\ 10 + 3 = 13 \end{array} \longrightarrow 11:13$$

The ratios are not the same

3. Riley needs to make fruit punch for the family reunion. One batch of punch has the ingredients shown. If the punch bowl holds **27 cups**, how many cups of orange juice will she need to keep the ratio in a full punch bowl the same?

Item	Cups
Cranberry Juice	4
Lemon Line Soda	1
Orange Juice	2
Pineapple Juice	2

9

$$4 + 1 + 2 + 2 = 9$$

$$\frac{2}{9} = \frac{\text{orange}}{27}$$

$$2 \times 27 = 54$$

$$54 \div 9 = 6 \text{ cups}$$

4. A small fruit basket contains the fruits shown. A large basket has the same ratio of fruits as the small basket.

Type of Fruit	Amount
Apple	6
Orange +	5
Pear	3

14

If the large basket has **42 total pieces** of fruit, how many are pears?

$$6 + 5 + 3 = 14$$

$$\frac{3}{14} = \frac{\text{pears}}{42}$$

$$3 \times 42 = 126$$

$$126 \div 14 = 9 \text{ pieces}$$

5. Mrs. Santiago is buying doughnuts for her office. Each box contains 6 glazed, 4 cream filled, and 2 chocolate flavored doughnuts. If there were 20 total cream filled doughnuts, how many chocolate doughnuts did she buy?

Step 1:

Glazed	6
Cream	4
Chocolate	2

Step 2:

$$\frac{\text{Cream}}{\text{Chocolates}} = \frac{4}{2} = \frac{20}{\text{chocolates}}$$

Step 3 :

$$2 \times 20 = 40$$

Step 4:  $40 \div 4 = 10$  chocolate doughnuts

6. A small batch of trail mix contains 2 cups of raisins, 2 cups of peanuts, 1 cup of sunflower seeds, and 1 cup of chocolate coated candies. A large batch has the same ratio of ingredients as a small batch. If the large batch has 8 cups of peanuts, how many cups of sunflower seeds are in a large batch?

Step 1:

$$\frac{\text{Peanuts}}{\text{Sunflower}} = \frac{2}{1} = \frac{8}{s}$$

Step 2:

$$1 \times 8 = 8$$

Step 3 :

$$8 \div 2 = 4 \text{ cups of sunflower}$$

**QUESTION 2: Show a ratio relationship between two quantities using tables of equivalent ratios and double number lines. (EX 1 – 3) PAGES 12-17**

**Example 1**

To make yellow icing, Amida mixes 6 drops of yellow food coloring with 2 cups of white icing. How many drops of yellow food coloring should Amida mix with 8 cups of white icing to get the same shade of yellow?

$$6 \times 4 = 24$$



Drops of Yellow	6	?
Cups of Icing	2	8



$$2 \times 4 = 8$$

**24 drops**

**Example 2**

Akeno mixes three sample containers of yellow paint with four sample containers of red paint to create his favorite shade of orange paint. His little sister Aiko wants to create the same shade of orange paint, but she only has two sample containers of red paint.

What should Aiko do to create the same shade of orange paint?

$$3 \div 2 = 1.5$$

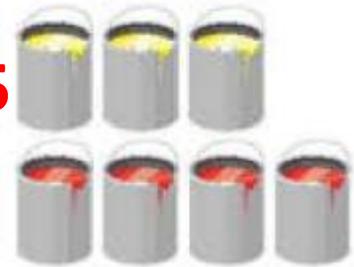


Yellow Paint (containers)	?	3
Red Paint (containers)	2	4



$$4 \div 2 = 2$$

**1.5 yellow paint**



**QUESTION 2: Show a ratio relationship between two quantities using tables of equivalent ratios and double number lines. (EX 1 – 3) PAGES 12-17**

**Example 3**

Natasha made raspberry punch for a party by mixing 9 fluid ounces of fruit punch, 3 liters of soda, and 6 scoops of raspberry ice cream. Halfway through the party, the punch bowl was empty.

If Natasha only has 6 fluid ounces of fruit punch left, how much ice cream does she need to make another batch of punch?

Fruit Punch (fl oz)	6	9
Ice Cream (scoops)	?	6

Fruit Punch (fl oz)	3	6	9
Ice Cream (scoops)	2	?	6

$$2 \times 3 = 6$$



$$2 \times 2 = 4$$

**4 scoops**

**QUESTION 3: Solve real-world problems involving ratio relationships by using bar diagrams, double number lines, and equivalent ratios. ( 1 – 6) PAGE 45**

1. A survey showed that 4 out of 5 students own a bicycle. Based on this result, how many of the 800 students in a school own a bicycle?

**Step 1:**

$$\frac{\text{bicycle}}{\text{students}} \quad \frac{4}{5} = \frac{b}{800}$$

**Step 2 :**

$$4 \times 800 = 3200$$

**Step 3:**  $3200 \div 5$

$$= 640 \text{ students own a bicycle}$$

2. A survey of Mr. Thorne's class shows that 5 out of 8 students will buy lunch today. Based on this result, how many of the 720 students in the school will buy today?

**Step 1:**

$$\frac{\text{Buy}}{\text{students}} \quad \frac{5}{8} = \frac{b}{720}$$

**Step 2 :**

$$5 \times 720 = 3600$$

**Step 3:**  $3600 \div 8$

$$= 450 \text{ students}$$

**QUESTION 3: Solve real-world problems involving ratio relationships by using bar diagrams, double number lines, and equivalent ratios. ( 1 – 6) PAGE 45**

3. The ratio of the number of baskets made by **Tony** to the number of baskets made by **Colin** is **2 to 3**. **Tony** made **10 baskets**. How many baskets did Colin make?

Step 1:

$$\frac{\text{Tony}}{\text{Colin}} = \frac{2}{3} = \frac{10}{c}$$

Step 2 :

$$3 \times 10 = 30$$

Step 3:  $30 \div 2$

$$= 15 \text{ baskets}$$

4. In the school choir, there is **1 boy** for every **4 girls**. There are a total of **11 boys**. How many girls are in the choir?

Step 1:

$$\frac{\text{boy}}{\text{girl}} = \frac{1}{4} = \frac{11}{g}$$

Step 2 :

$$4 \times 11 = 44$$

Step 3:  $44 \div 1$

$$= 44 \text{ girls}$$

**QUESTION 3: Solve real-world problems involving ratio relationships by using bar diagrams, double number lines, and equivalent ratios. ( 1 – 6) PAGE 45**

5. Liberty Middle School has **600 students**. In Anna's class, **3 out of 8** students walk to school. How many students at the school can be expected **to walk to school**?

Step 1:

$$\frac{\text{Student walk}}{\text{Total students}} = \frac{3}{8} = \frac{s}{600}$$

Step 2 :

$$3 \times 600 = 1800$$

Step 3:  $1800 \div 8$

$$= 225 \text{ students}$$

6. Pine Hill Middle School has **300 students**. In Zoey's class, **2 out of 5** students belong to a club. How many students at the school would you expect to belong to a club?

Step 1:

$$\frac{\text{Student belong}}{\text{Club}} = \frac{2}{5} = \frac{b}{300}$$

Step 2 :

$$2 \times 300 = 600$$

Step 3:  $600 \div 5$

$$= 120 \text{ students}$$

**QUESTION 4. Use ratio reasoning to convert between customary units of measurement (1 – 8) PAGE 55**

1. Mrs. Menary made  $4\frac{1}{2}$  quarts of lemonade for a school party. How many fluid ounces of lemonade did she make?

$$4.5 \text{ quarts} = \text{fl oz}$$

$$4.5 \times 8 \times 2 \times 2$$

$$= 144 \text{ fl oz}$$

Larger Unit	→	Smaller Unit
1 cup (c)	=	8 fluid ounces (fl oz)
1 pint (pt)	=	2 cups
1 quart (qt)	=	2 pints
1 gallon (gal)	=	4 quarts

3. The Martinez family has  $\frac{3}{4}$  gallon of orange juice in the refrigerator. How many cups of orange juice are in the refrigerator?

$$\frac{3}{4} \text{ gallon} = \text{cups}$$

$$0.75 \times 2 \times 2 \times 4$$

$$= 12 \text{ cups}$$

2. A class walked 2.5 miles for a walk-a-thon. How many yards did the class walk?

$$2.5 \text{ miles} = \text{yards}$$

$$2.5 \times 5280 = 13200$$

$$= 13200 \div 3$$

$$= 4,400 \text{ yards}$$

Larger Unit	→	Smaller Unit
1 foot (ft)	=	12 inches (in.)
1 yard (yd)	=	3 feet
1 mile (mi)	=	5,280 feet

4. A grand piano can weigh  $\frac{1}{2}$  ton. How many ounces can a grand piano weigh?

$$\frac{1}{2} \text{ ton} = \text{ounces}$$

$$0.5 \times 2000 \times 16$$

$$= 16,000 \text{ ounces}$$

Larger Unit	→	Smaller Unit
1 pound (lb)	=	16 ounces (oz)
1 ton (T)	=	2,000 pounds

**QUESTION 4. Use ratio reasoning to convert between customary units of measurement (1 – 8) PAGE 55**

5. A female hippopotamus can weigh 48,000 ounces. How many tons can a female hippopotamus weigh?

$$48000 \text{ ounces} = \text{tons}$$

$$48000 \div (16 \times 2000)$$

$$48000 \div 32000$$

$$= 1.5 \text{ tons}$$

Larger Unit	→	Smaller Unit
1 pound (lb)	=	16 ounces (oz)
1 ton (T)	=	2,000 pounds

7. An elephant can drink up to 6,400 fluid ounces of water a day. How many gallons of water can an elephant drink per day?

$$6,400 \text{ fl oz} = \text{gallons}$$

$$6,400 \div (8 \times 2 \times 2 \times 4)$$

$$6,400 \div 128$$

$$= 50 \text{ gallons}$$

Larger Unit	→	Smaller Unit
1 cup (c)	=	8 fluid ounces (fl oz)
1 pint (pt)	=	2 cups
1 quart (qt)	=	2 pints
1 gallon (gal)	=	4 quarts

6. At soccer practice, Tracey's best kick travelled a distance of 1,200 inches. For how many yards did she kick the ball?

$$1,200 \text{ inches} = \text{yards}$$

$$1,200 \div (12 \times 3)$$

$$1,200 \div 36$$

$$= 33 \frac{1}{3} \text{ yards}$$

Larger Unit	→	Smaller Unit
1 foot (ft)	=	12 inches (in.)
1 yard (yd)	=	3 feet
1 mile (mi)	=	5,280 feet

8. A recipe for ice cream calls for 56 fluid ounces of milk. How many pints of milk are there in the recipe?

$$56 \text{ fl oz} = \text{pints}$$

$$56 \div (8 \times 2)$$

$$56 \div 16$$

$$= 3.5 \text{ pints}$$

QUESTION 5: Use ratio and rate reasoning to find a unit rate (1 – 7) PAGE 63

1. A hippopotamus can run 6 kilometers in 15 minutes. At this rate, how far can the hippopotamus run in 1 minute?

$$\frac{6 \text{ kilometers}}{15 \text{ minutes}} \div 15 = \frac{0.4 \text{ kilometers}}{1 \text{ minute}}$$

0.4 kilometer per 1 minute

2. Imena earned \$261 last week. If she worked 18 hours and earned the same amount each hour, how much was she paid per hour?

$$\frac{\$ 261}{18 \text{ hours}} \div 18 = \frac{\$ 14.5}{1 \text{ hour}}$$

\$ 14.5 per 1 hour

3. A cat's heart beats approximately 45 times in 15 seconds. At this rate how many times does the cat's heart beat per second?

$$\frac{45 \text{ heart beats}}{15 \text{ seconds}} \div 15 = \frac{3 \text{ heart beats}}{1 \text{ second}}$$

3 heart beats per second

4. Mr. Farley used 4 pounds of hamburger to make 10 hamburger patties of the same size. How many pounds of hamburger did he use per patty?

$$\frac{4 \text{ pounds}}{10 \text{ hamburgers}} \div 10 = \frac{0.4 \text{ pounds}}{1 \text{ hamburger}}$$

0.4 pound per 1 hamburger

5. At the school festival, Heather can buy 25 game tickets for \$10, or she can pay \$0.50 per game ticket. Which option has the lesser price per ticket?

$$\frac{\$ 10}{25 \text{ games}} \div 25 = \frac{\$ 0.4}{1 \text{ game}}$$

$$\$ 0.4 < \$ 0.50$$

25 game tickets for \$10

6 At a toy store, Cotton can buy a package of 6 mini footballs for \$7.50, or a package of 8 mini footballs for \$9.60. Which option has the lesser price per mini football?

$$\frac{\$ 7.50}{6 \text{ mini}} \div 6 = \frac{\$ 1.25}{1 \text{ mini}} \quad \frac{\$ 9.60}{8 \text{ mini}} \div 8 = \frac{\$ 1.2}{1 \text{ mini}}$$

$$\$ 1.25 > \$ 1.2$$

8 mini footballs for \$9.60

7. The table shows the options Zoe's other has for buying tickets to an adventure day camp for Zoe and 5 of her friends. Which option has the lesser cost per student ticket?

Adventure Camp Tickets	
Option	Cost (\$)
6-pack of Student Tickets	126.00
Individual Student Ticket	21.50

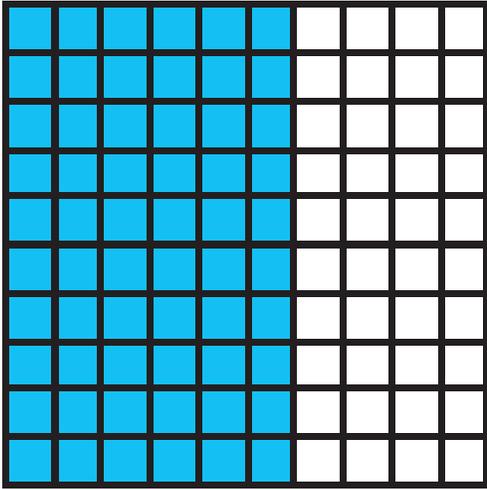
$$\frac{\$ 126}{6 \text{ tickets}} \div 6 = \frac{\$ 21}{1 \text{ ticket}} \quad \frac{\$ 21.50}{1 \text{ ticket}}$$

$$\$ 21 < \$ 21.50$$

6-pack of student Tickets

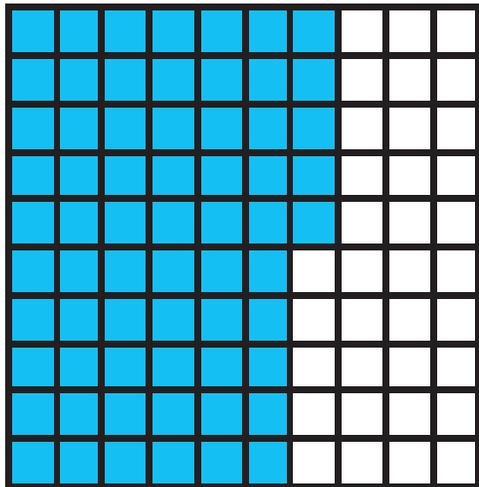
For Exercises 1 and 2, identify the percent represented by each  $10 \times 10$  grid.

1.



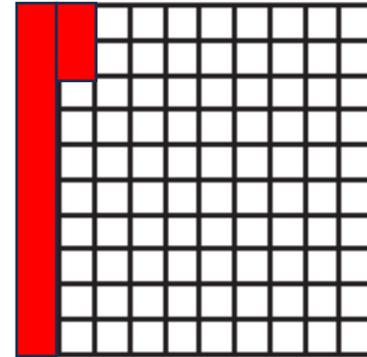
60%

2.

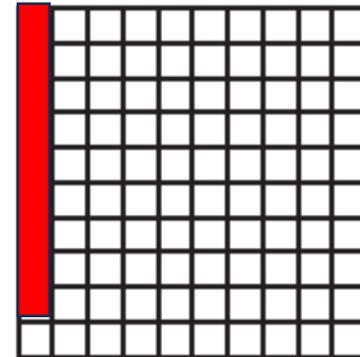


65%

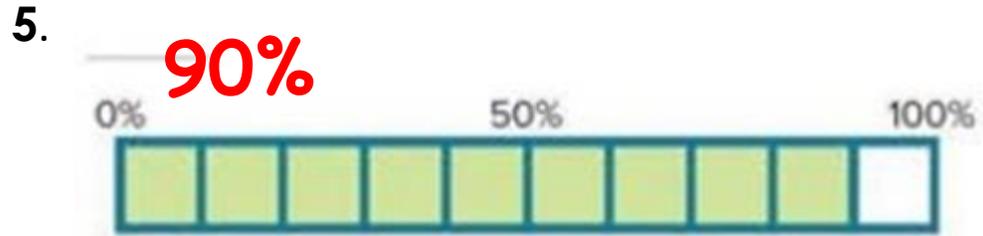
3. In a school survey, 12% of the students surveyed said they like camping. Shade the  $10 \times 10$  grid to model 12%.



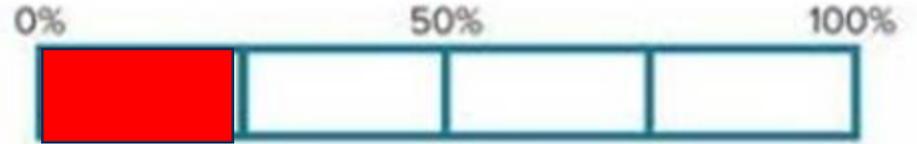
4. Of the students in the lunch line, 9% said they were buying strawberry milk. Shade the  $10 \times 10$  grid to model 9%.



For Exercises 5 and 6, identify the percent represented by each bar diagram.

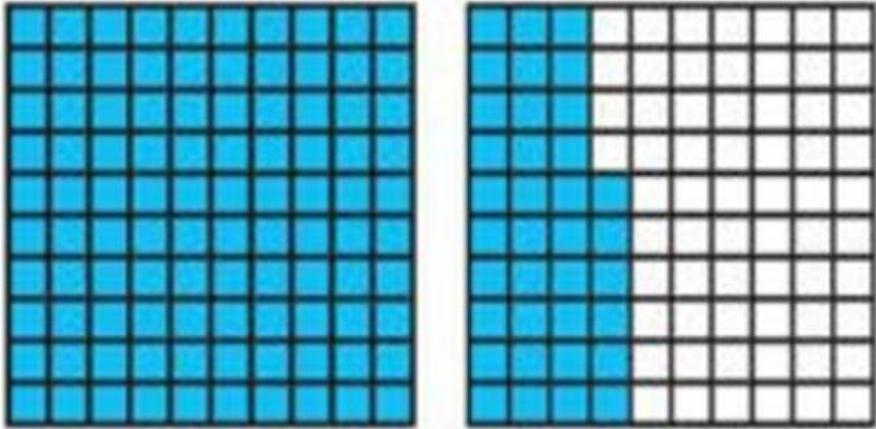


7. Shade the bar diagram to model 25%.



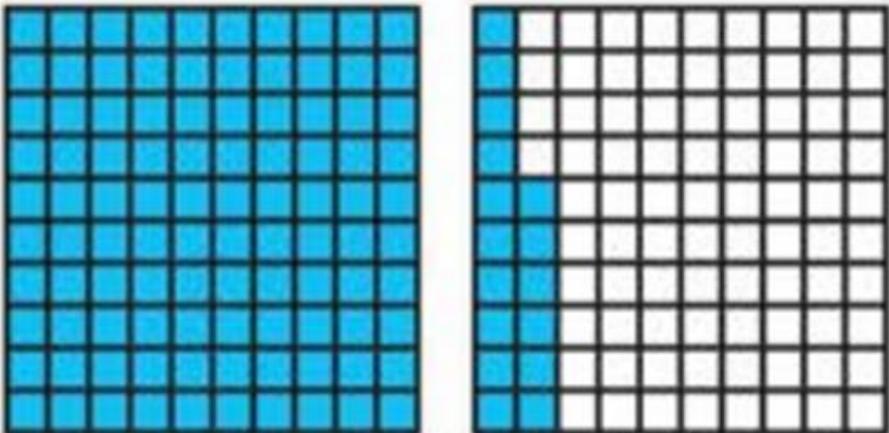
Identify the percent represented by the 10 x 10 grids.

1.



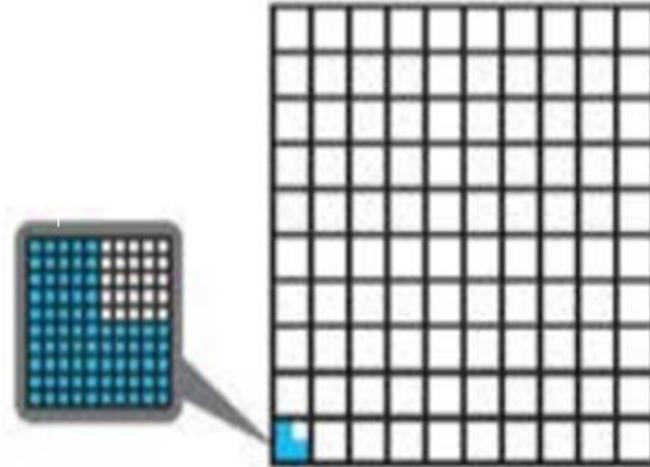
**136%**

2.



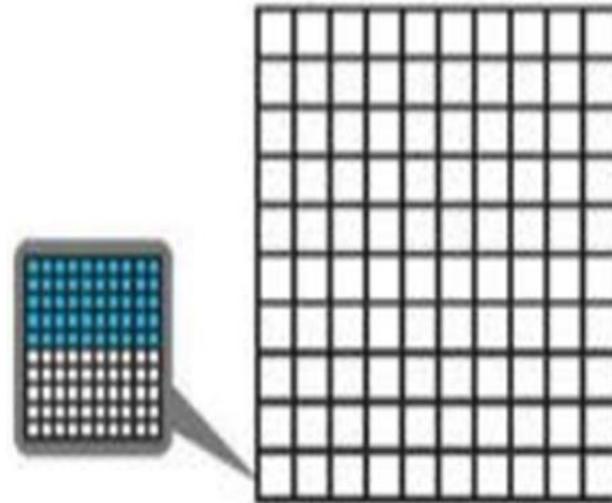
**116%**

3.



**0.75%**

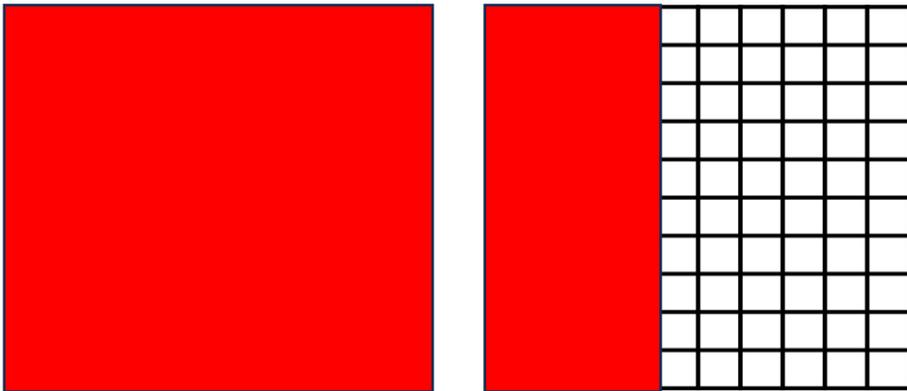
4.



**0.50%**

5. The size of a large milkshake is 1.4 times the size of a medium milkshake. Write a percent that compares the size of the large milkshake to the size of the small milkshake. Then draw and shade 10x10 grids to model the percent.

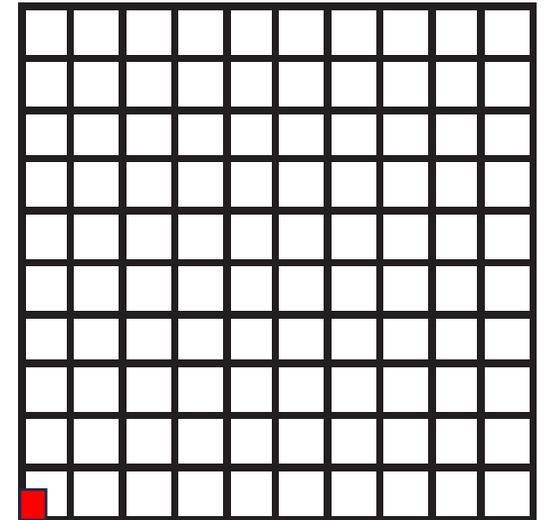
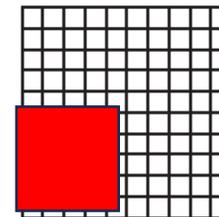
$$1.4 \times 100 = 140\%$$



6. The Freedom Tower is 1,776 feet tall. Mr. Feeman's students are building a replica of the tower for a class project that will stand 4.44 feet tall. Write a percent that compares the height of the replica to the height of the actual tower. Then shade the 10 x 10 grid to model the percent.

$$\frac{4.44}{1776} = \frac{1}{400}$$

$$\frac{1}{400} \times 100\% = \frac{1}{4}\% \text{ Or } 0.25\%$$



**QUESTION 8: Relate fractions, decimals, and percents by using place-value reasoning and understanding a percent as a ratio that compares a number to 100 (1 – 9) PAGE 101**

Write each percent as a fraction in simplest form and as decimal.

1. 45%

$$\frac{45}{100} \div 5 = \frac{9}{20}$$

0.45

2. 72%

$$\frac{72}{100} \div 4 = \frac{18}{25}$$

0.72

3. 80%

$$\frac{80}{100} \div 20 = \frac{4}{5}$$

0.80 or 0.8

Write each fraction as a percent and as a decimal.

4.  $\frac{3}{20} \times 5 = \frac{15}{100}$

15% ; 0.15

5.  $1\frac{3}{4} \times 20 = \frac{75}{100}$

1.75% ; 1.75

6.  $\frac{5}{8} \times 12.5 = \frac{62.5}{100}$

62.5% ; 0.625

Write each decimal as a percent and as a fraction in simplest form.

7.  $0.89 = \frac{89}{100}$  ; 89%

8.  $0.82 = \frac{82 \div 2}{100 \div 2} = \frac{41}{50}$  ; 82%

9.  $0.65 = \frac{65 \div 5}{100 \div 5} = \frac{13}{20}$  ; 65%

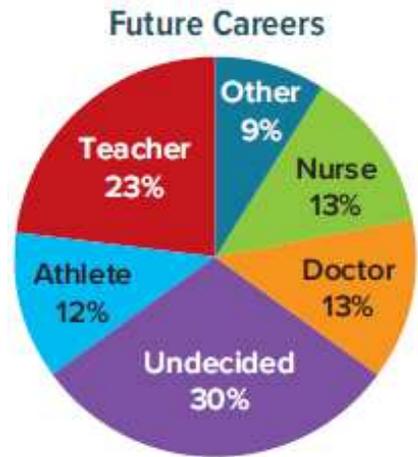
1. The graph shows the career interests of the students at Linda's school. Suppose there are 400 students at the school. How many of them want to be an athlete?

$$\frac{\textit{Part}}{\textit{whole}} = \frac{\quad}{100}$$

$$\frac{p}{400} = \frac{12}{100}$$

$$p = 12 \times 400 = 4800$$
$$= 4800 \div 100$$

$$p = 48$$



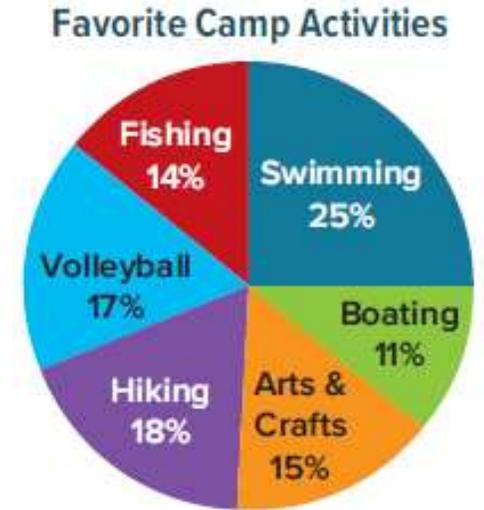
2. The graph shows the favorite activities of campers at a summer camp. Suppose there are 300 campers at the camp. How many campers favor fishing?

$$\frac{\textit{Part}}{\textit{whole}} = \frac{\quad}{100}$$

$$\frac{p}{300} = \frac{14}{100}$$

$$p = 14 \times 300 = 4200$$
$$= 4200 \div 100$$

$$p = 42$$



Use any method to find the percent of each number.

3. 15% of 240 =

$$= \frac{15}{100} \times 240$$

$$= \frac{15 \times 240}{100}$$

$$= \frac{\cancel{3600}}{\cancel{100}}$$

$$= 36$$

4. 65% of 180 =

$$= \frac{65}{100} \times 180$$

$$= \frac{65 \times 180}{100}$$

$$= \frac{\cancel{11700}}{\cancel{100}}$$

$$= 117$$

5. 250% of 82 = \_

$$= \frac{250}{100} \times 82$$

$$= \frac{250 \times 82}{100}$$

$$= \frac{\cancel{20500}}{\cancel{100}}$$

$$= 205$$

6. 150% of 44 =

$$= \frac{150}{100} \times 44$$

$$= \frac{150 \times 44}{100}$$

$$= \frac{\cancel{6600}}{\cancel{100}}$$

$$= 66$$

7. 0.15% of 350 =

$$= \frac{0.15}{100} \times 350$$

$$= \frac{0.15 \times 350}{100}$$

$$= \frac{52.5}{100}$$

$$= 0.525$$

8. 0.4% of 168 =

$$= \frac{0.4}{100} \times 168$$

$$= \frac{0.4 \times 168}{100}$$

$$= \frac{67.2}{100}$$

$$= 0.672$$





4. What number multiplied by  $\frac{3}{5}$  has a product of 1.

$$\frac{3}{5} \times \frac{5}{3} = \frac{15}{15} = 1 \quad \frac{5}{3}$$

5. What number multiplied by  $\frac{7}{10}$  has a product of 1.

$$\frac{7}{10} \times \frac{10}{7} = \frac{70}{70} = 1 \quad \frac{10}{7}$$

Divide. Write in simplest form.

<p>6. <math>3 \div \frac{1}{4} =</math></p> $\frac{3}{1} \times \frac{4}{1} = \frac{12}{1} = 12$	<p>7. <math>4 \div \frac{2}{5} =</math></p> $\frac{4}{1} \times \frac{5}{2} = \frac{20}{2} = 10$	<p>8. <math>6 \div \frac{2}{3} =</math></p> $\frac{6}{1} \times \frac{3}{2} = \frac{18}{2} = 9$
--	--	---

9. Marie is making scarves. She has 7 yards of fabric and each scarf needs  $\frac{5}{8}$  yard fabric. Find  $7 \div \frac{5}{8}$ . Then interpret the quotient.

$$\frac{7}{1} \times \frac{8}{5} = \frac{56}{5} = 11 \frac{1}{5}$$

$11 \frac{1}{5}$ ; Marie can make  $11 \frac{1}{5}$  scarves or 11 whole scarves.

Divide. Write in simplest form.

$$1. \frac{5}{6} \div \frac{5}{12} =$$

$$\frac{5}{12} = \frac{12}{5}$$

$$\frac{\cancel{5}}{\cancel{6}} \times \frac{\overset{\cancel{6} \times 2}{12}}{\cancel{5}} = 2$$

$$2. \frac{1}{3} \div \frac{1}{9} =$$

$$\frac{1}{9} = \frac{9}{1}$$

$$\frac{\cancel{1}}{\cancel{3}} \times \frac{\overset{\cancel{3} \times 3}{9}}{\cancel{1}} = 3$$

$$3. \frac{3}{7} \div \frac{1}{14} =$$

$$\frac{1}{14} = \frac{14}{1}$$

$$\frac{3}{\cancel{7}} \times \frac{\overset{\cancel{7} \times 2}{14}}{1} = \frac{6}{1} = 6$$

4. Romeo had  $\frac{3}{4}$  pound of fudge left. He divided the remaining fudge into  $\frac{5}{16}$  pound bags. Write and solve an equation that models the situation. Then interpret the quotient.

1

$$\frac{3}{4} \div \frac{5}{16} =$$



2

$$\frac{3}{\cancel{4}} \times \frac{\cancel{4} \times 4}{5} = \frac{12}{5} = 2\frac{2}{5}$$

Romeo can make 2 whole bags.

5. Chelsea has  $\frac{7}{8}$  pound of butter to make icing. Each batch of icing needs  $\frac{1}{4}$  pound of butter. Write and solve an equation that models the situation. Then interpret the quotient.

$$\frac{7}{8} \div \frac{1}{4} =$$

$$\frac{7}{\cancel{8}} \times \frac{\cancel{4}}{1} = \frac{7}{2} = 3\frac{1}{2}$$

Chelsea can make 3 whole batches of icing

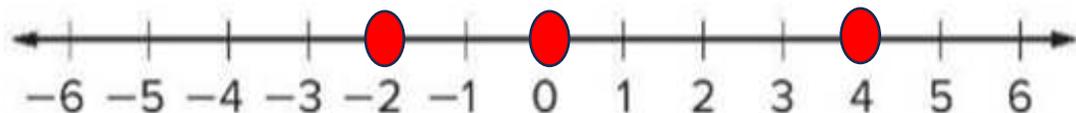
6. Write a story context for  $\frac{5}{6} \div \frac{1}{6}$ . Then find the quotient.

A nature trail is  $\frac{5}{6}$  mile long. There are information markers every  $\frac{1}{6}$  mile. How many information markers are there?

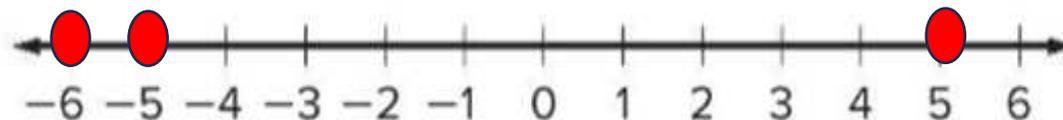
5 markers

Graph each of set on a number line.

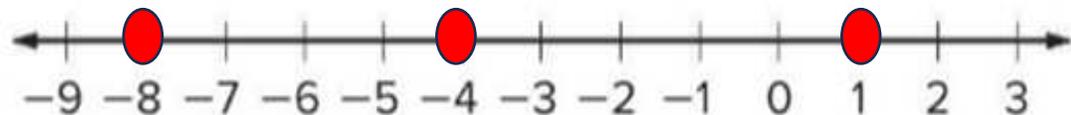
7.  $\{-2, 0, 4\}$



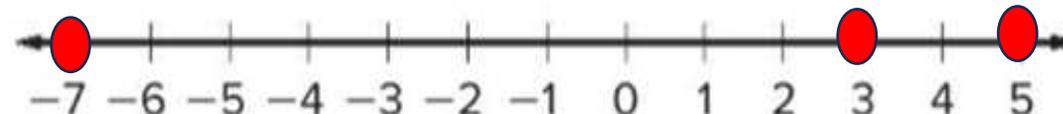
8.  $\{5, -5, -6\}$



9.  $\{-8, -4, 1\}$



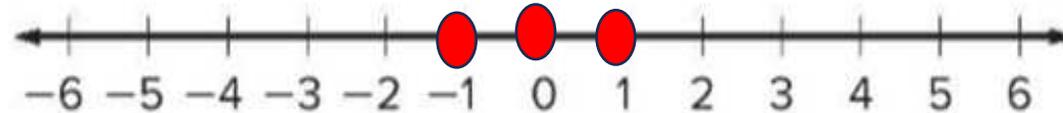
10.  $\{-7, 3, 5\}$



11.  $\{7, -3, -1\}$



12.  $\{-1, 0, 1\}$



Fill in the \_\_\_\_ with  $<$ ,  $>$ , or  $=$  to make a true statement.

5.  $-0.24$    $-\frac{3}{16}$

$$\begin{array}{r} 0.18 \\ 16 \overline{)300} \\ \underline{-16} \phantom{0} \\ 140 \end{array}$$

$-0.24 < -0.18$

6.  $-\frac{5}{8}$    $-0.76$

$$\begin{array}{r} 0.62 \\ 8 \overline{)500} \\ \underline{-48} \phantom{0} \\ 20 \end{array}$$

$-0.62 > -0.76$

7.  $-4\frac{4}{25}$    $-4.16$

$$\begin{array}{r} 0.16 \\ 25 \overline{)400} \\ \underline{-25} \phantom{0} \\ 150 \end{array}$$

$-4.16 = -4.16$

8.  $-5.52$    $-5\frac{7}{15}$

$$\begin{array}{r} 0.46 \\ 15 \overline{)700} \\ \underline{-60} \phantom{0} \\ 100 \\ \underline{-90} \\ 10 \end{array}$$

$-5.52 < -5.16$

Identify the quadrant in which each point is located.

1.  $\left(-1\frac{1}{2}, -2\frac{1}{4}\right)$

**Quadrant III**

2.  $\left(5\frac{3}{4}, -6\frac{1}{5}\right)$

**Quadrant IV**

3.  $\left(\frac{4}{5}, 3\frac{3}{4}\right)$

**Quadrant I**

4.  $\left(-3\frac{1}{2}, 2\frac{4}{5}\right)$

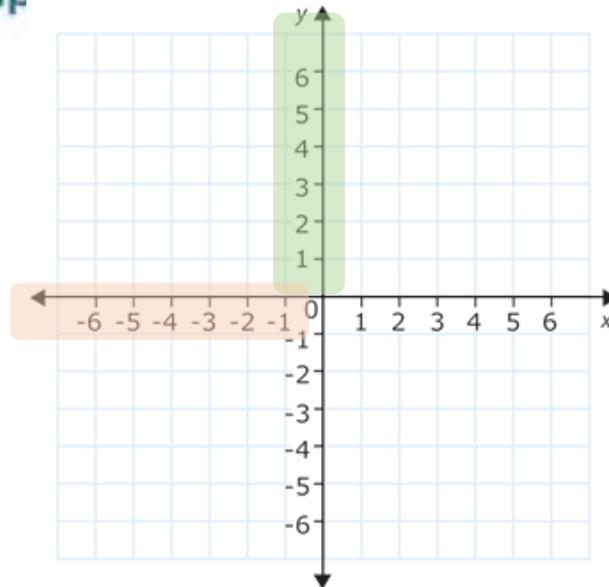
**Quadrant II**

5. Identify the axis on which the point  $\left(-\frac{2}{3}, 0\right)$  is located. (Example 2)

**x-axis**

6. Identify the axis on which the point  $\left(0, 6\frac{3}{5}\right)$  is located. (Example 2)

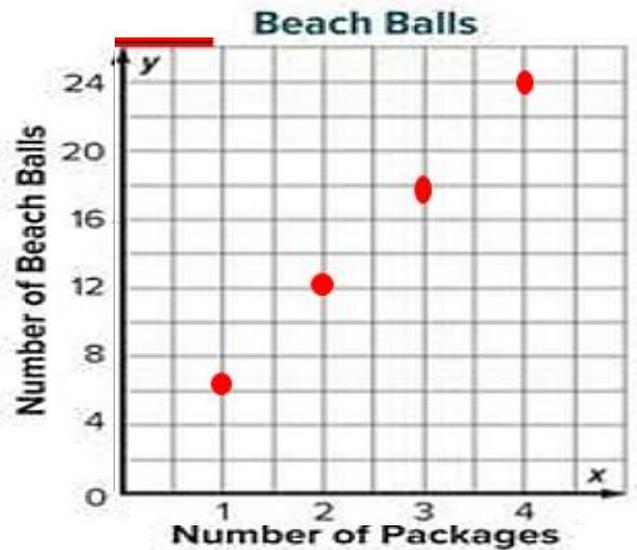
**y-axis**



**QUESTION 16: Represent a collection of equivalent ratios as ordered pairs. Graph a ratio relationship on the coordinate plane (1 – 4) PAGES 27 - 28**

1. Lulah is buying beach balls for her beach themed party. Each package contains 6 beach balls. Generate the set of ordered pairs for the ratio relationship between the number of beach balls  $y$  and the number of packages  $x$  for a total of 1, 2, 3, and 4 packages. Then graph the relationship on the coordinate plane and describe the pattern in the graph.

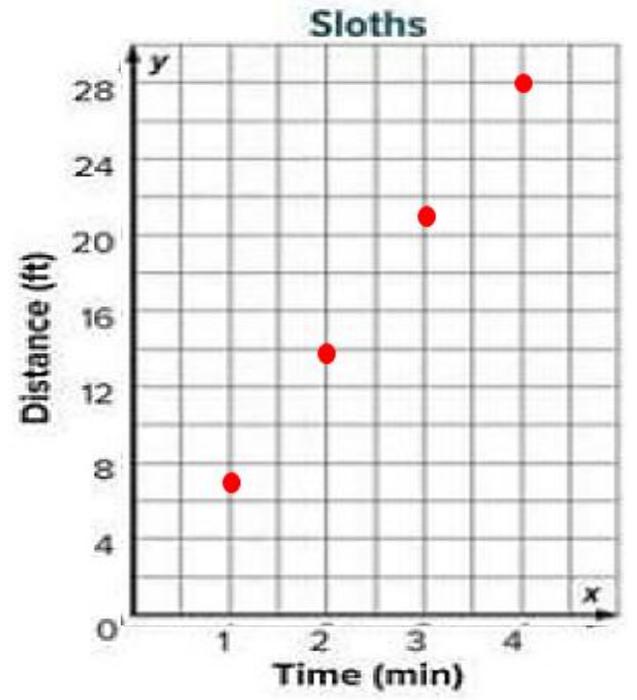
X	1	2	3	4
Y	6	12	18	24



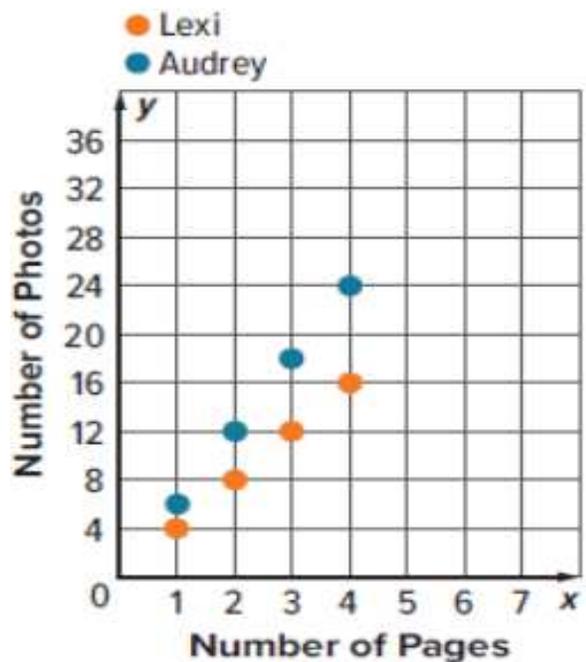
2. A sloth travels about 7 feet every minute. Generate the set of ordered pairs for the ratio relationship between the total distance traveled  $y$  and the number of minutes  $x$  for a total of 1, 2, 3, and 4 minutes. Then graph the relationship on the coordinate plane and describe the pattern in the graph.

X	1	2	3	4
Y	7	14	21	28

$(1,7), (2,14), (3,21), (4,28),$

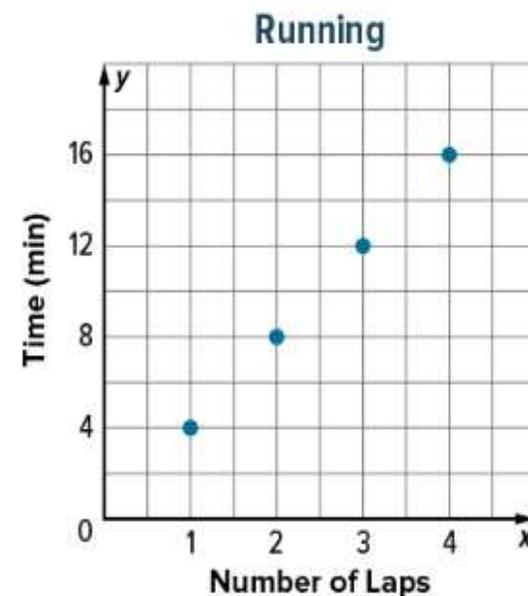


3. Two friends are making scrapbooks. The number of photos Lexi and Audrey place on each page of their scrapbooks is shown in the graph. Describe the ratio relationship for each person.



The ratio of photos to pages for Lexi scrapbook is 4 : 1. The ratio of photos to pages for Audrey scrapbook is 6 : 1. So, Audrey uses more photos per page than Lexi.

4. Lacy is running laps around the track. The time in minutes and the number of laps ran are shown in the graph. Which of the following statements are true about the ratio relationship shown in the graph? Select all that apply.

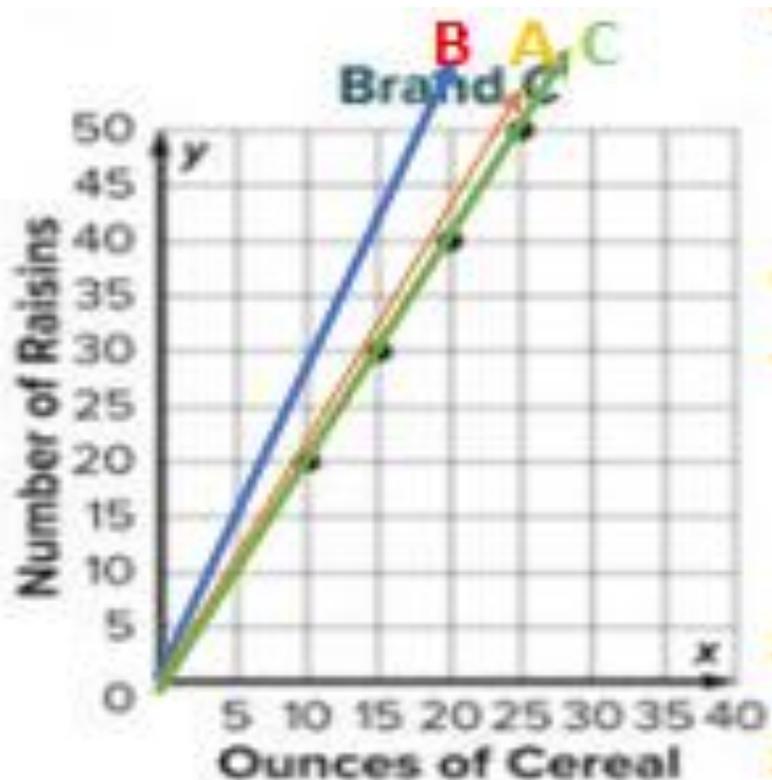


- A) Every 4 minutes, Lacy ran 1 lap.
- B) Lacy ran 8 laps in 2 minutes.
- C) It took Lacy 1 minute to run 4 laps.
- D) In 16 minutes, Lacy completed 4 laps.
- E) Based on the relationship, it would take Lacy 20 minutes to complete 5 laps.

## QUESTION 17: Compare ratio relationships that are shown using different representations(1-5) PAGES 35 - 36

1. Cereal Brand A advertises that they have 60 raisins in their 24-ounce box of cereal. The advertised ratio raisins to ounces for two other cereal brands are shown in the table and graph. Which brand advertises the greatest ratio of raisins to ounces of cereal? Justify your response.

Brand B				
Ounces of Cereal	6	12	20	24
Raisins	18	36	60	72



The greatest ratio of raisins to ounces of cereal is **Brand B**.

When all 3 ratio relationships are graphed on the same graph, the graph for Brand B is the steepest.

**QUESTION 17: Compare ratio relationships that are shown using different representations(1-5) PAGEs 35 - 36**

2. At the gym, Alex spends 24 minutes doing resistance training for every 30 minutes spent doing cardio exercises, Carisa spends 15 minutes on resistance for every 20 minutes on cardio, and Manuel spends 14 minutes on resistance for every 15 minutes on cardio. Which person has the greatest ratio of minutes spent on resistance to minutes spent on cardio?

**Alex**

Resistance (min)	24	48	72
Cardio (min)	30	60	90

**Carisa**

Resistance (min)	15	45	60
Cardio (min)	20	60	100

**Manuel**

Resistance (min)	14	56	98
Cardio (min)	15	60	105

The greatest ratio of minutes spent on resistance to minutes spent on cardio is **Manuel**.

When all 3 ratio people spend 60 minutes on cardio, Manuel spends 56 minutes on resistance, followed by Alex with 48 minutes, and Carisa with 45 minutes.

3. Mrs. Quinto is comparing the Calories in different types of bread. Wheat bread has 150 Calories for every 2 slices. The Calories in two other types of bread are shown in the table and graph. Which bread has the greatest ratio of Calories to slices?

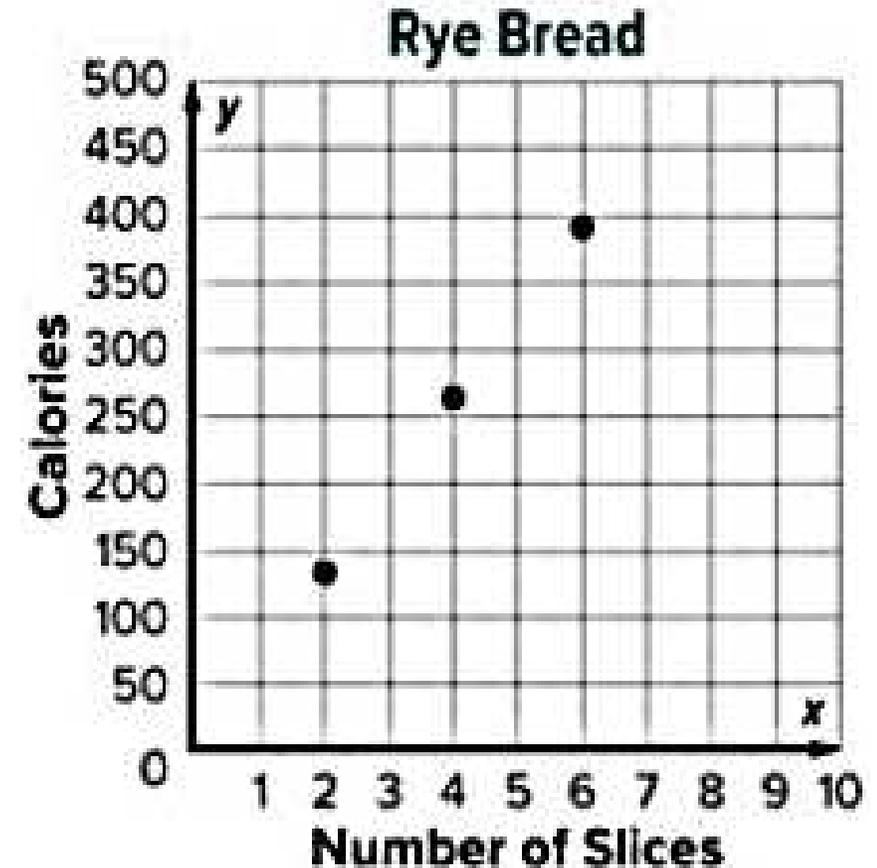
White Bread

Slices	Calories
2	160
4	320
6	480

Wheat bread :- 150 : 2

White Bread :- 160 : 2

Rye Bread :- 140 : 2



**White Bread**

**QUESTION 17: Compare ratio relationships that are shown using different representations(1-5) PAGEs 35 - 36**

4. Mrs. Gonzalez wants to hire a catering company for her daughter's quinceanera. The ratios of the cost per person for a child and an adult for two different companies are shown in the table. Mrs. Gonzalez is planning on 25 adults and 12 children attending the party. How much less will it cost for her to hire Planning Pros than Party Time? **\$19.50**

	Party Time	Planning Pros
Cost per Adult (\$)	10.50 +25	9.00 +25
Cost per Child (\$)	6.00 +12	7.50 +12

	Party Time	Planning Pros
Cost per Adult (\$)	35.50	34.00
Cost per Child (\$)	18.00	19.50

$$35.50 \div 18.00 = 1.97$$

$$34.00 \div 19.50 = 1.74$$

5. Charlie, Beth, and Miguel all babysit kids in their neighborhood. The table shows the number of hours and the amount each of them earned last night. If each person babysits for 5 hours next weekend, which person will earn the most money? Use a coordinate plane if needed to solve.

	Charlie	Beth	Miguel
Number of Hours	3	4.5	4
Total Earned (\$)	28.50	42.00	40.00

$$28.50 \div 3$$

$$= 9.5$$

$$42.00 \div 4.5$$

$$= 9.3$$

$$40.00 \div 4$$

$$= 10$$

**The most money the Miguel**

7. Emilia and her three sisters went out to dinner. The total cost of their dinner was \$38.75. They want to leave a tip that is 23% of the total bill. About how much of a tip should they leave?

25% of 40

$$\frac{25 \times 40}{100}$$
$$\frac{100}{10} = 10$$

About 10

8. Karl earned \$188 last month doing chores after school. If 68% of the money he earned was from doing yard work, about how much did Karl earn doing yard work?

70% of 200

$$\frac{70 \times 200}{100}$$
$$70 \times 2 = 140$$

About 140

9. The concession stand at a football game served 288 customers. Of those customers, about 77% bought a hot dog. About how many customers bought a hot dog?

Estimate for 77% of \$ 288

↓                      ↓  
75% of 300

$$\frac{75}{100} \times 300$$

$$= \frac{75 \times 300}{100} \approx 225$$

10. In a recent season, the Chicago Cubs won 64% of the 161 regular season games they played. About how many games did they win?

Estimate for 64% of \$ 161

↓                      ↓  
65% of 160

$$\frac{65}{100} \times 160$$

$$= \frac{65 \times 160}{100} \approx 104$$



4.  $3,409 \div 14 =$

14	14	14	14	14
× 1	× 2	× 3	× 4	× 5
14	28	42	56	70

Annexing Zeros

With Remainders

		2	4	3	R 7
14	)	3	4	0	9
		-2	8		
		0	6	0	
			-5	6	
			0	4	9
				-4	2
				0	7

			2	4	3	•	5
14	)	3	4	0	9	0	
		-2	8				
		0	6	0			
			-5	6			
			0	4	9		
				-4	2		
				0	7	0	
					-7	0	
					0	0	

5.  $8,890 \div 40 =$

40	40	40	40	40
× 1	× 2	× 3	× 4	× 5
40	80	120	160	200

With Remainders

		2	2	2	R 10
40	)	8	8	9	0
		-8	0		
		0	8	9	
			-8	0	
			0	9	0
				-8	0
				1	0

Annexing Zeros

		2	2	2	•	2	5
40	)	8	8	9	0	0	0
		-8	0				
		0	8	9			
			-8	0			
			0	9	0		
				-8	0		
				1	0	0	
					-8	0	
					2	0	0
					-2	0	0
					0	0	0

6.  $3,120 \div 64 =$

64	64	64	64	64
× 1	× 2	× 3	× 4	× 5
64	128	192	256	320

64	64	64
× 6	× 7	× 8
384	448	512

With Remainders

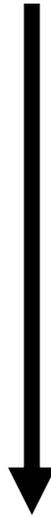
		4	8	R 48	
64	)	3	1	2	0
		-2	5	6	
		0	5	6	0
			-5	1	2
			0	4	8

Annexing Zeros

		4	8	•	7	5
40	)	3	1	2	0	0
		-2	5	6		
		0	5	6	0	
			-5	1	2	
			0	4	8	0
				-4	4	8
				0	3	2
					-3	2
					0	0

Order each set of rational numbers from least to greatest.

9.  $\left\{-4.25, -4\frac{7}{10}, -4\frac{3}{20}\right\}$



$$\begin{array}{r} 0.15 \\ 20 \overline{)300} \\ \underline{-20} \phantom{0} \\ 100 \\ \underline{-100} \\ 000 \end{array}$$

$-4.25$     $-4.7$     $-4.15$

$-4\frac{7}{10}$ ,  $-4.25$ ,  $-4\frac{3}{20}$

10.  $\left\{-1.55, -1\frac{11}{100}, -1\frac{23}{25}\right\}$



$$\frac{23}{25} \times 4 = \frac{92}{100}$$

$= 0.92$

$-1.55$     $-1.11$     $-1.92$

$-1\frac{23}{25}$ ,  $-1.55$ ,  $-1\frac{11}{100}$

11. The change in runners' goals and their actual times is shown in the table. Order the changes from least to greatest.

Runner	Change (min)
Sean	-3.2
Lacy	$1\frac{2}{5}$
Maura	1.43
Amos	$-2\frac{1}{5}$

**$-3.2, -2\frac{1}{5}, 1\frac{2}{5}, 1.43$**

12. Order the numbers from least to greatest.

**$-1.75, 2, 1.25, -2, 0$**

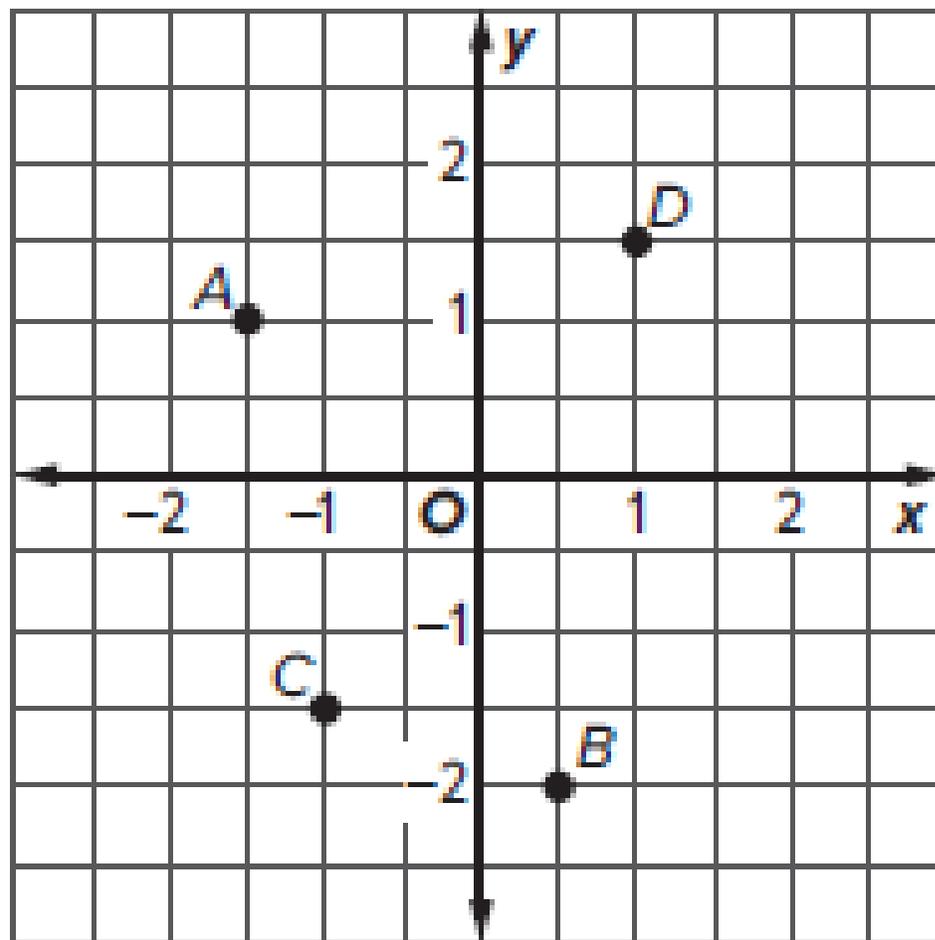
**$-2, -1.75, 0, 1.25, 2$**

Use the coordinate plane. Identify the ordered pair that names each point.

7. A  $(-1\frac{1}{2}, 1)$

8. B  $(\frac{1}{2}, -2)$

9. C  $(-1, -1\frac{1}{2})$

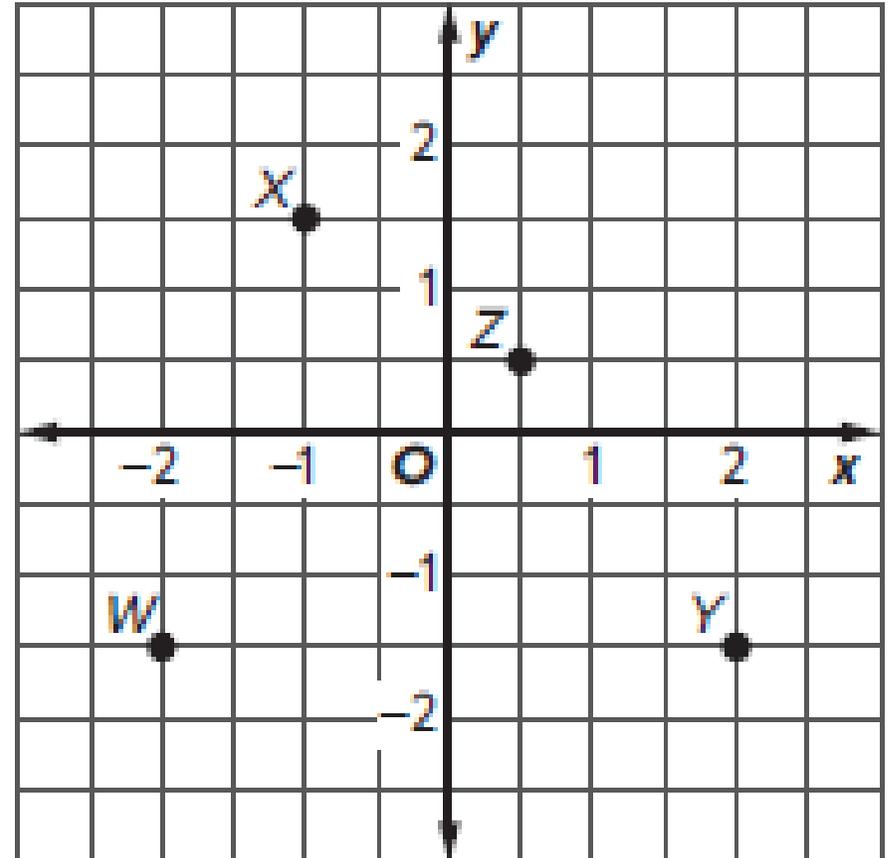


Use the coordinate plane. Identify the point for each ordered pair.

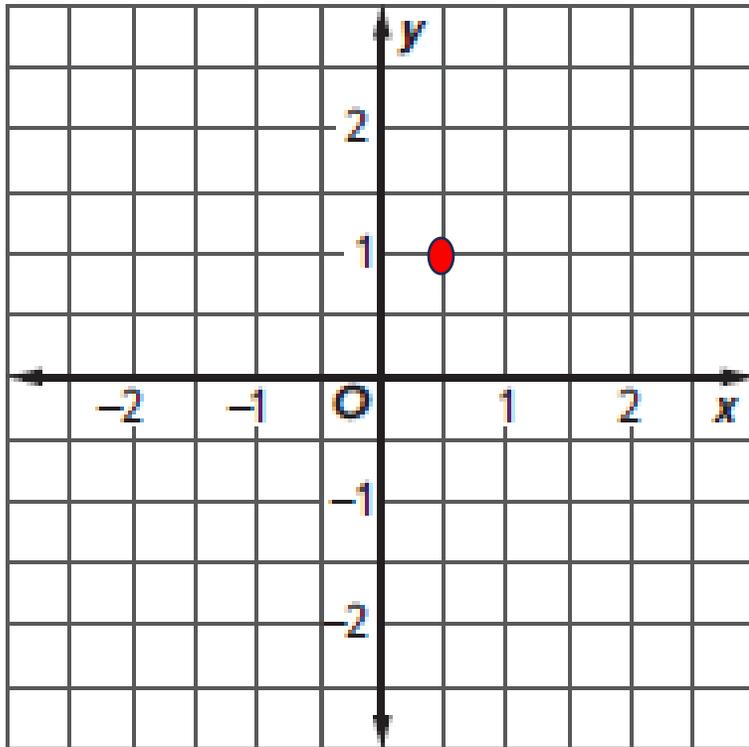
10.  $\left(\frac{1}{2}, \frac{1}{2}\right)$  (+, +) Z

11.  $\left(-1, 1\frac{1}{2}\right)$  (-, +) X

12.  $\left(-2, -1\frac{1}{2}\right)$  (-, -) W



13. Graph  $A\left(\frac{1}{2}, 1\right)$



14. Graph  $X\left(-1\frac{1}{2}, 2\right)$

