

Grade 8 General
Term 3 Revision
2023-2024



EoT3 Exam Coverage
Module 9 - 11
Mathematics/Reveal

Part (1)

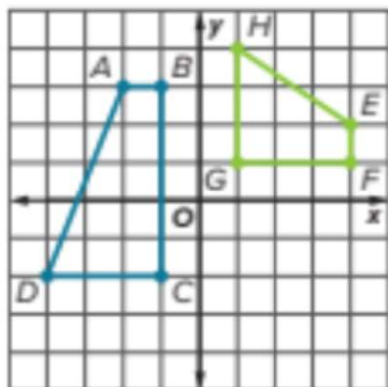
15 main questions

(4) Marks per main question

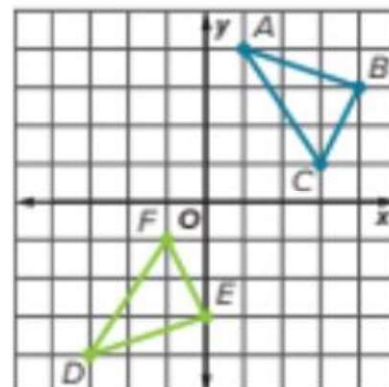
MCQ

60 Marks

- Q₁** Determine if each pair of figures are congruent. If so, describe a sequence of transformations that maps one figure onto the other figure.
1. If not, explain why they are not congruent. (Examples 1 and 2)

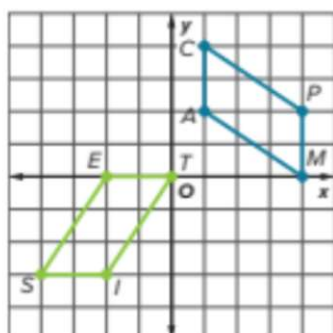


Not congruent: No sequence of rotations, reflections, and or translations will match the two figures up exactly.



congruent; Reflecting $\triangle ABC$ across the x-axis followed by a translation 4 units left maps $\triangle ABC$ onto $\triangle DEF$.

- Q₁** Parallelogram CAMP is congruent to parallelogram SITE.
3. Determine which sequence of transformations maps parallelogram CAMP on to parallelogram SITE. (Example 3)

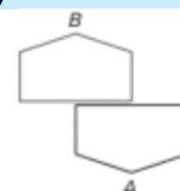


If you rotate parallelogram CAMP 90 degree counterclockwise about the origin and then translate it 4 units down, it coincides with parallelogram SITE.

- Q₂** For his school web page, Manuel created the logo shown at the right.
4. What transformations could be used to create the logo if Figure A is the preimage and Figure B is the image? Are the two figures congruent? (Example 4)

They are a congruent by a rotation followed a translation.

They are a congruent by a _____ followed a _____.

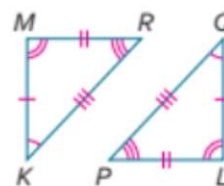
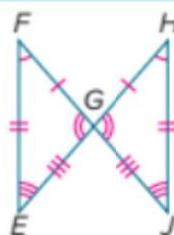
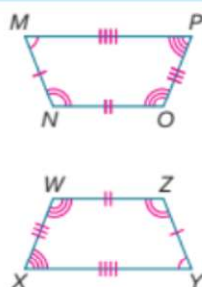
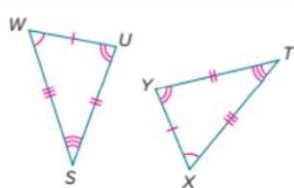


- Q₂** For the local art gallery opening, the curator had the design shown at the right
5. created. What transformations could be used to create the design if Figure A is the preimage and Figure B is the image? Are the two figures congruent? (Example 4)

They are a congruent by a reflection followed by a translation.

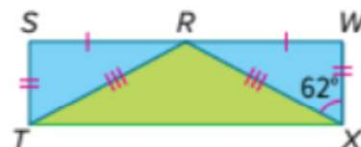


Q₃
1.:4. Write congruence statements comparing the corresponding parts in ³each set of congruent figures. (Examples 1).

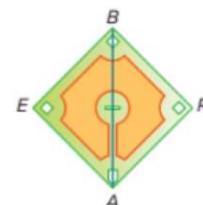


p.g.499+500

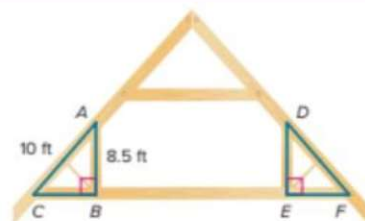
Q₃
5. In the quilt design shown, $\triangle RST \cong \triangle RWX$ If $m(\angle WXR) = 62^\circ$,
What is the measure of $\angle STR$? (Example 2)



Q₃
6. In the baseball diamond shown, $\triangle BEA \cong \triangle ARB$,
The length of \overline{BE} is 90 feet. What is the length of \overline{AR} ? (Example 2)



Q₃
7. In the roof construction shown, $\triangle ABC \cong \triangle DEF$, If $AB = 8.5$ feet and $AC = 10$ feet, what is the length of EF ? Round to the nearest tenth.

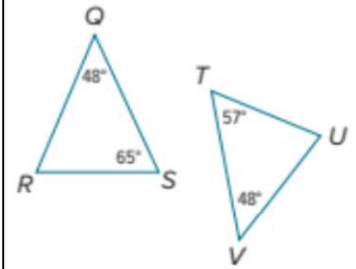
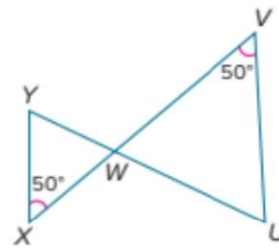
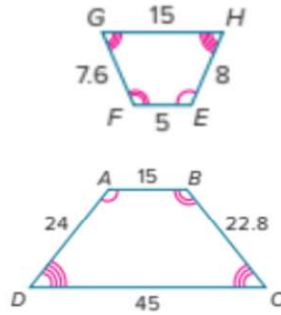
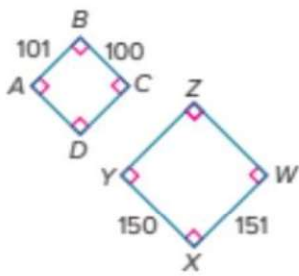


Q₃
8. In the city park map shown, $\triangle DEF \cong \triangle JKL$, The distance from D to E is 20 yards and the distance from D to F is 40 yards.
What is the distance from K to L? Round to the nearest tenth?



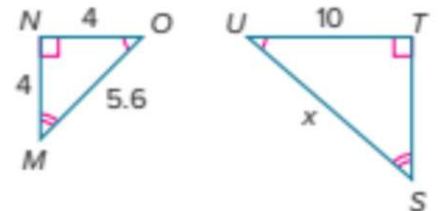
Q4. Determine whether each pair of polygons is similar. If so, **write a similarity statement.** (Examples 1 and 2).

1.:4.



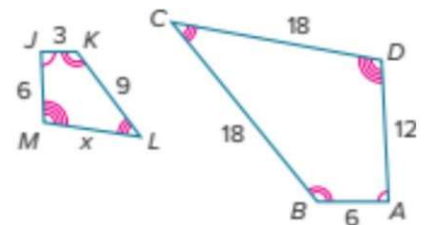
Q5. Each pair of polygons is similar. **Find each missing side measure.** (Example 3)

5.



Q5. Each pair of polygons is similar. **Find each missing side measure.** (Example 3)

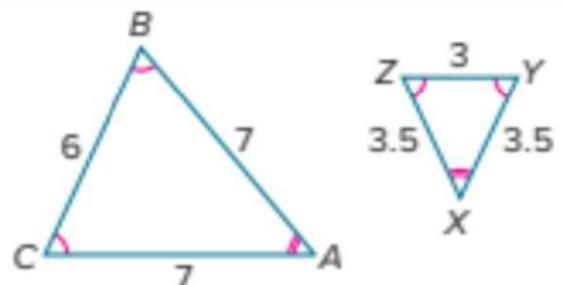
6.



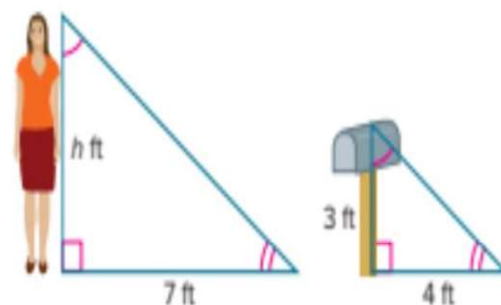
Q5. Which of the following is true about, $\triangle ABC$ and $\triangle XYZ$? **Select all that apply.**

7.

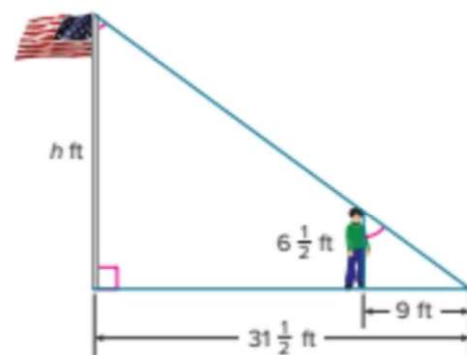
- ☐ The triangles are similar.
- ☐ The triangles are not similar.
- ☐ The triangles are congruent.
- ☐ $\triangle ABC \sim \triangle XYZ$
- ☐ $\triangle ABC \cong \triangle XYZ$



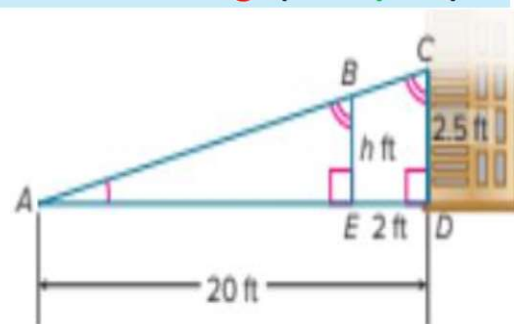
- Q₆. Becky casts a 7-foot shadow at the same time a nearby mailbox casts a 4-foot shadow. If the mailbox is 3 feet tall, **how tall is Becky?** (Example 1)



- Q₆. At the same time a $6\frac{1}{2}$ -foot tall teacher casts a 9-foot shadow, a nearby flagpole casts a $31\frac{1}{2}$ -foot shadow. **How tall is the flagpole?** (Example 1)



- Q₆. In the figure, $\triangle ABE$ is similar to $\triangle ACD$. **What is the height h of the ramp when it is 2 feet from the building?** (Example 2)



- Q₆. In the figure, the triangles are similar. **What is the distance d from the water ride to the roller coaster?** Round to the nearest tenth. (Example 2)



- Q₆. If a 25 -foot-tall house casts a 75 -foot shadow at the same time that a streetlight casts a 60 -foot shadow, **how tall is the streetlight?**

- Q₆. A child and a statue casts the shadow lengths shown at the same time.
6. **Complete the table to find the height, in feet, of the statue.**

Object	Height of Object (ft)	Shadow Length (ft)
Emma	3.5	5.25
Statue		57

The statue is feet tall.

- Q₆. Mr. Nolan's math class went out to measure shadows in their school yard.
7. Their data is recorded in the table. **Find the missing heights.**

Person/Item	Shadow Length (ft)	Height of Person/ Item (ft)
Mr. Nolan	9	6
Flagpole	48	
School	63	
School Bus	16.5	

- Q₆. A map of a treasure hunt is shown. In the figure, the triangles are similar.
8. **What is the distance from the silver coins to the gold coins?**



The distance from the silver coins to the gold coins is yards.

Q6. Justify Conclusions Is the following statement true or false?

9. Write an argument that can be used to defend your solution. If two angles of one triangle are congruent to two angles of another triangle, then you can use indirect measurement to determine the length of a missing side.

True; The triangles are similar using Angle-Angle Similarity.

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Q6. Create Write and solve a real-world problem in which you would need to use shadow reckoning to determine the height of an object.

10.

The length of a shadow of a house having 30 m height is $30\sqrt{3}$ m. What is the length of shadow of the house having the height $40\sqrt{3}$ m at the same time?

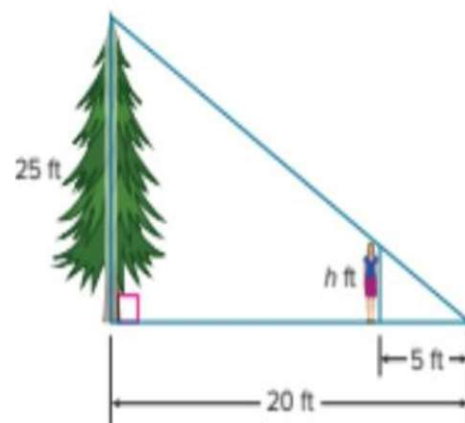
20-foot light post casts a shadow 25 feet long. At the same time, a building nearby casts a shadow 50 feet long. How tall is the building?

Q6. MP Find the Error A student used the proportion below to find the person's height h shown in the diagram. Find the student's mistake and correct it.

11.

$$\frac{h}{5} = \frac{20}{25}$$

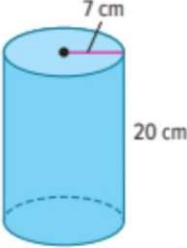
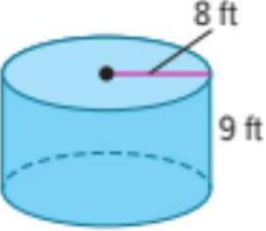
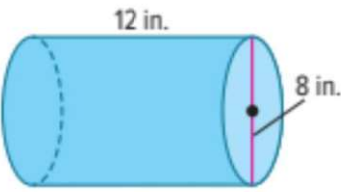
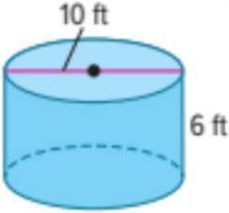
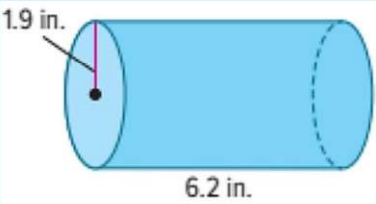
$$h = 4$$

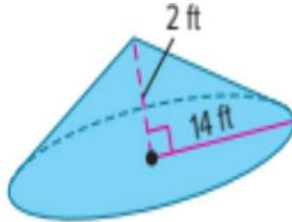
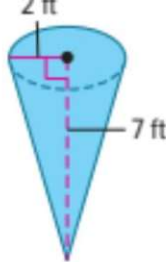
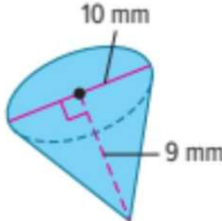
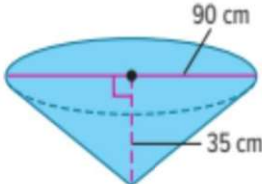
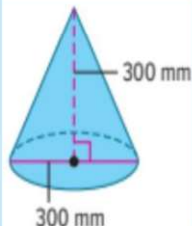


Module

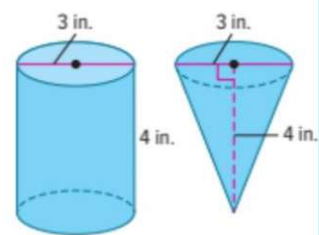
10

مدرسة الصقور

Q7. Find the volume of each cylinder. Round to the nearest tenth. (Example 1)			
Q7. 1.		Q7. 2.	
Q7. Find the volume of each cylinder. Express your answer in terms of π. (Example 2)			
Q7. 3.		Q7. 4.	
Q7. 5.	A wooden toy block is in the shape of a cylinder. The toy block has a height of 4 inches and a diameter of 3 inches. How much does the toy block weigh if 1 cubic inch of wood weighs 0.55 ounce? Round to the nearest tenth. (Example 3)		
Q7. 6.	A large rainwater collection tub is shaped like a cylinder. The diameter is 28 inches and the height is 40 inches. If the tub is 75% filled, what is the volume of water in the tub? Round to the nearest tenth.		
Q7. 7.	Multiple Choice What is the volume of the cylinder shown? (Use 3.14 for π.) <div> <div>a. 22.382 in³</div> <div>b. 70.279 in³</div> <div>c. 73.036 in³</div> <div>d. 229.333 in³</div> </div>		
			

Q ₈ . Find the volume of each a cone Express your answer in terms of π . (Example 1)			
Q ₈ . 1.		Q ₈ . 2.	
Q ₈ . 3.		Q ₈ . 4.	
Q ₈ . 5.	A funnel is in the shape of a cone. The radius is 2 inches and the height is 4.6 inches. What is the volume of the funnel? Round to the nearest tenth. (Example 2)		
Q ₈ . 6.	Marta bought a paperweight in the shape of a cone. The radius was 10 centimeters and the height 9 centimeters. Find the volume. Round to the nearest tenth. (Example 2)		
Q ₈ . 7.	A lampshade is in the shape of a cone. The diameter is 5 inches and the height is 6.5 inches. Find the volume. Round to the nearest tenth. (Example 2)		
8. Multiple Choice What is the volume of the cone shown? (Use 3.14 for π)			
<div>a. 7,068,583.5 mm³</div> <div>b. 14,137,166.9 mm³</div> <div>c. 21,205,750.4 mm³</div> <div>d. 229.33304 mm³</div>			
			

- Q₉.**
9. A frozen yogurt shop offers frozen yogurt in the sizes shown. The cost per cubic inch is \$0.10 for each container's contents. **What is the difference between the costs of yogurt in the two containers if each is filled with yogurt**



- Q₉.**
10. Cone A and Cone B both have a height of 5 inches. The volume of Cone A is 20.9 cubic inches. The volume of Cone B is 4 times the volume of Cone A. **About how many times longer is the diameter of Cone B than the diameter of Cone A?**

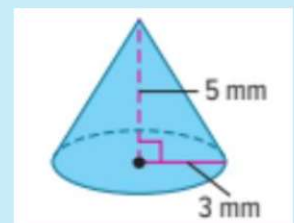
- Q₉.**
11. Without calculating, which cone has a greater volume: one with a height of 6 inches and radius of 4 inches or one with a height of 4 inches and radius of 6 inches?


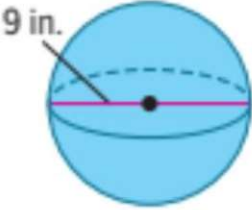
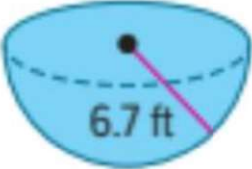
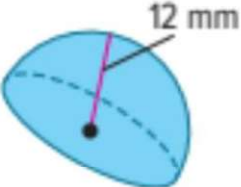

- Q₉.**
12. **Find the volume of the cone** with a height of 8 centimeters and a circumference of 18.84 centimeters. Round to the nearest

- Q₉.**
13. The volumes of a cylinder and a cone are equal. **How many times greater is the height of the cone than the height of the cylinder?** Write an argument that can be used to defend your solution.

- Q₉.**
14. Find the Error A student found the volume of the cone shown. **Find his mistake and correct it.**

a. $\frac{1}{3} \pi r^2 h \text{ mm}^3$ **b.** $\frac{1}{3} \pi (6)^2 (5) \text{ mm}^3$ **c.** 188.8 mm^3



Q ₁₀ . Find the volume of each sphere Express your answer in terms of π . (Example 1)			
Q ₁₀ . 1.		Q ₁₀ . 2.	
Q ₁₀ . 3.	A necklace has a single spherical pearl with a radius of 2.1 millimeters. What is the volume of the pearl? Round to the nearest tenth. (Example 2)		
Q ₁₀ . 4.	The radius of a mini-basketball is 4 inches. A pump can inflate the ball at a rate of 6 cubic inches per second. How long will it take to inflate the ball? Round to the nearest tenth. (Example 3)		
Q ₁₀ .	Find the volume of each hemi sphere. Round to the nearest tenth. (Example 4)		
Q ₁₁ . 5.		Q ₁₁ . 6.	
Q ₁₁ .7. Olga is using spherical beads to create a border on a picture frame. Each bead has a diameter of 1.5 millimeters. Find the volume of each bead. Round to the nearest tenth.		Q ₁₁ .8. What is the volume of the sphere shown? (Use 3.14 for π)	
			

مَدْرَسَةُ الصِّقُورِ

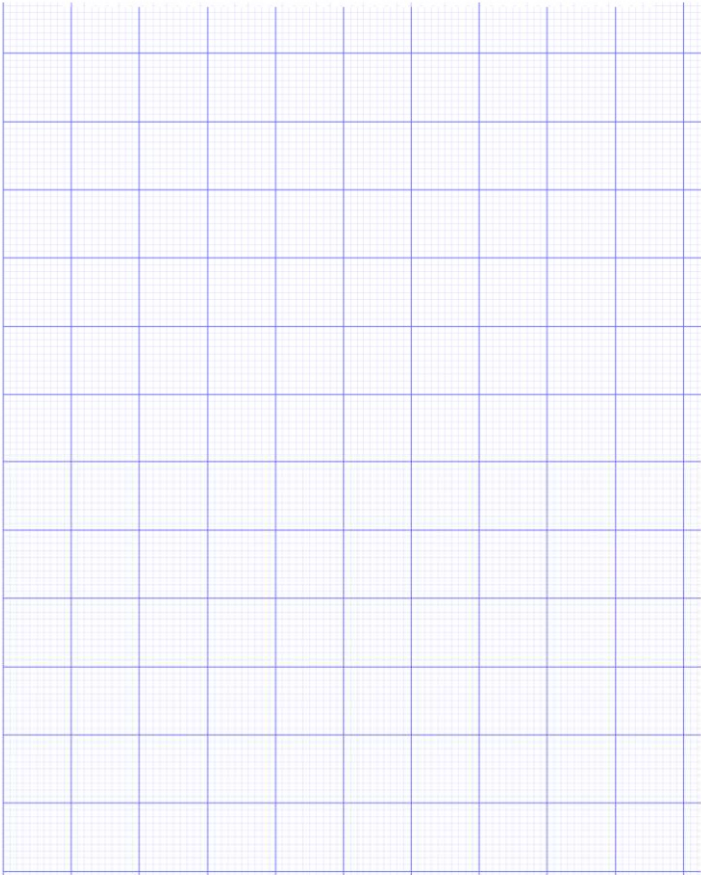
Module

11

Q₁₃.
1.

The table shows the average points scored per game by an NBA player in the first ten seasons of his career. Construct a scatter plot of the data. (Example 1)

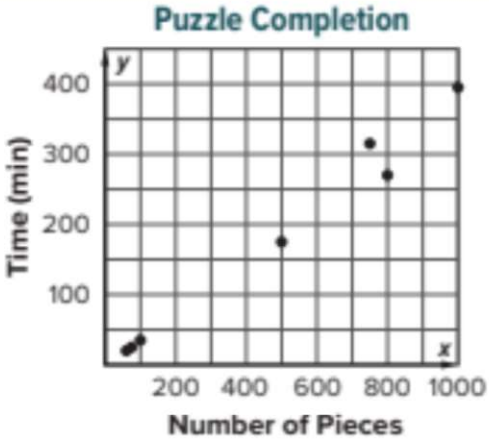
Season	1	2	3	4	5
Average Points Per Game	28.2	22.7	37.1	35.0	32.5
Season	6	7	8	9	10
Average Points Per Game	33.6	31.5	30.1	32.6	26.9



P.g 589

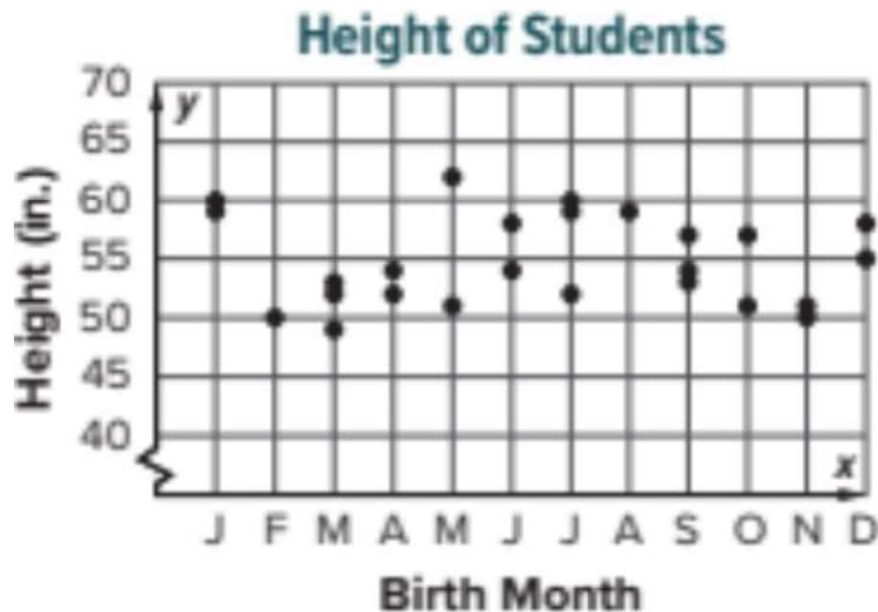
Q₁₃.
2.

The scatter plot shows the relationship between the number of pieces in a jigsaw puzzle and the number of minutes that are recommended to complete the puzzle. Interpret the scatter plot. (Example 2)



Q₁₃.
3.

Multiple Choice The scatter plot shows the relationship between the birth month of every student in Mari's class and their height. Which is the best interpretation of the data? (**Example 3**)

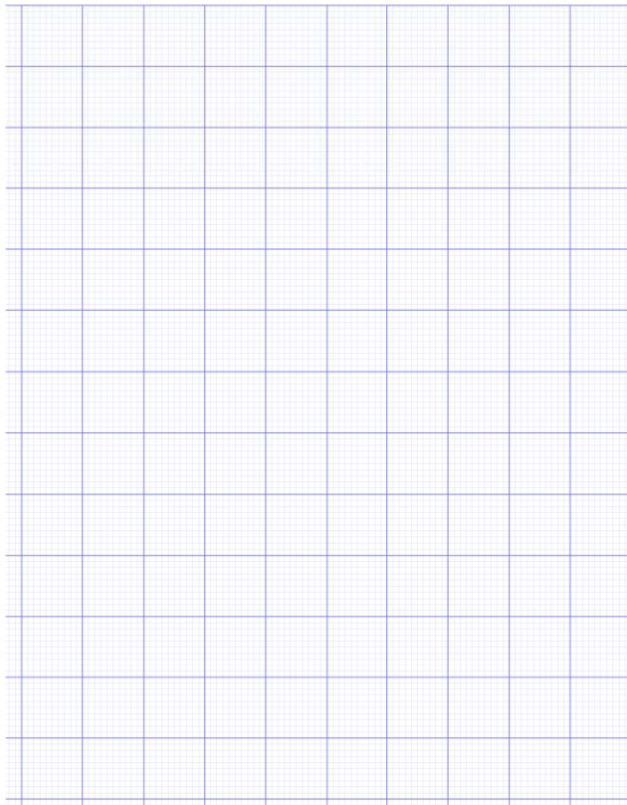


P. 589

- a.** As the months progress, the heights of the students increase.
There is a positive, linear association. There are no clusters or outliers.
- b.** The height of a student does not depend on their birth month.
The scatter plot shows no association.
- c.** As the months progress, the heights of the students decrease.
There is a negative, linear association. There are no clusters or outliers.
- d.** As the months progress, the heights of the students are the same.
There is a positive, linear association

- Q₁₄.** The table shows the average combined miles per gallon (MPG) and greenhouse gas (GHG) rating for certain mid-size cars. Construct a scatter plot. Then draw and assess a line that seems to represent the data. (**Example 1**)
- 1.**

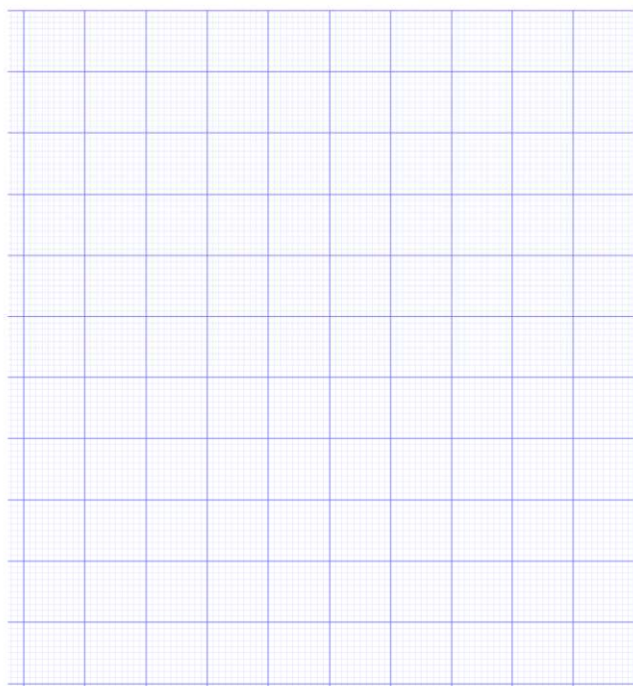
Average MPG	22	25	31	28	16	26
GHG Rating	5	6	7	7	3	6
Average MPG	35	41	24	32	30	23
GHG Rating	8	9	5	8	7	5



Q₁₄. The table shows the fat and Calorie content for several snack foods.

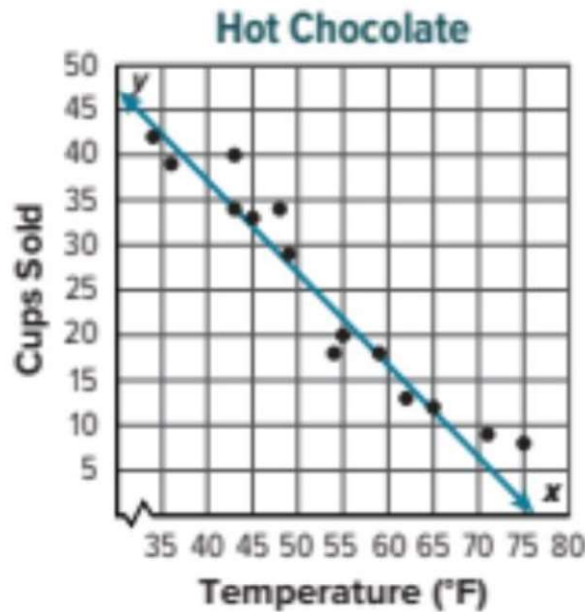
2. **Construct a scatter plot. Then draw and assess a line that seems to represent the data. (Example 1)**

Fat (g)	1	6	7	8	12	18	20
Calories	200	222	239	274	338	339	385



- Q₁₄. 3. The scatter plot shows the number of cups of hot chocolate sold at a football game and the average temperature during the game.

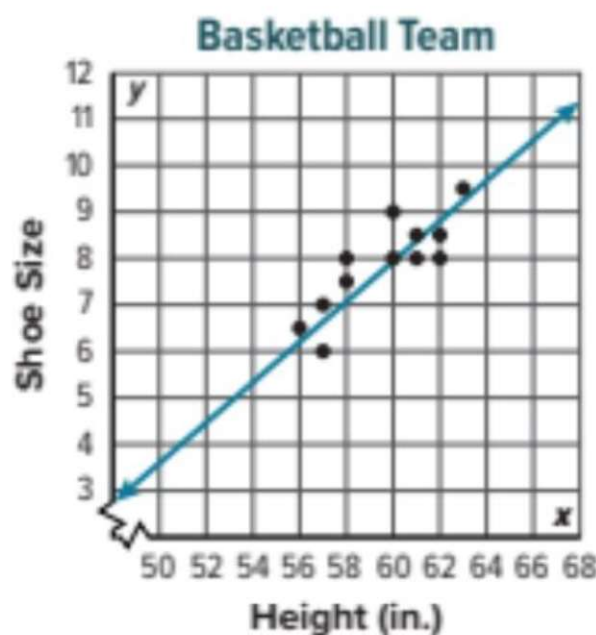
Use the line of fit to make a conjecture about the number of cups of hot chocolate sold if the average temperature is 50°F (Example 2)



P.g 597

- Q₁₄. 4. The scatter plot shows the height and shoe size of the players on the boys' basketball team.

Use the line of fit to make a conjecture about the shoe size of a boy on the team that is 59 inches tall. (Example 2)



P.g 597

Q_{15.}
1.

Omar surveyed students at his school. He found that 23 students are in the Chess Club, and 8 of those students are in the Math Club. There are 19 students that are in the Math Club. Ten students are in neither club.

Construct a two-way table summarizing the data.

	Math Club	No Math Club	Total
Chess Club			
No Chess Club			
Total			

P.g 617

Q_{15.}
2.

The table shows the results of a survey that asked seventh and eighth grade students whether they buy or pack their lunch. **Find the relative frequencies.**

Round to the nearest hundredth. Are seventh graders or eighth graders more likely to buy their lunch? Explain. (Example 2)

	Buy Lunch	Pack a Lunch	Total
7th Graders	30	45	75
8th Graders	51	25	76
Total	81	70	151

	Buy Lunch	Pack a Lunch	Total
7th Graders			
8th Graders			
Total			

P.g 617

Q_{15.}
3.

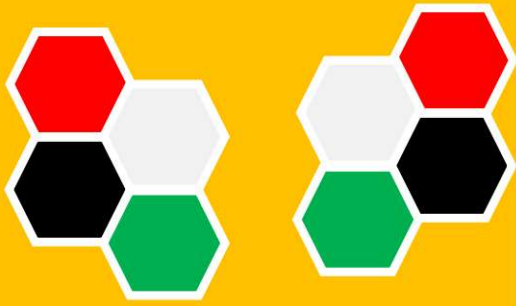
The table shows the results of a survey about the number of bus riders at McGuffey Junior High. **Find the relative frequencies.** Round to the nearest hundredth.

Are male students or female students more likely to not ride the bus? Explain. (Example 3)

	Male	Female	Total
Bus	110	84	194
No Bus	85	42	127
Total	195	126	321

	Male	Female	Total
Bus			
No Bus			
Total			

P.g 617



Grade 8 General
Term 3 Revision
2023-2024

EoT3 Exam Coverage

Module 9 - 11

Mathematics/Reveal Part (2)

Paper-Based

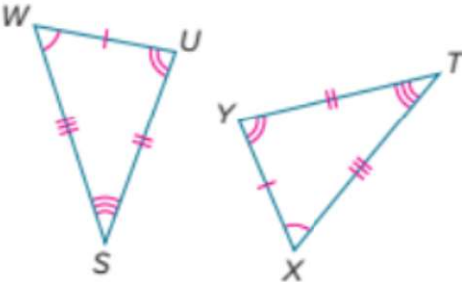
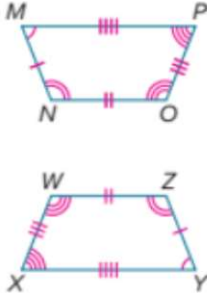
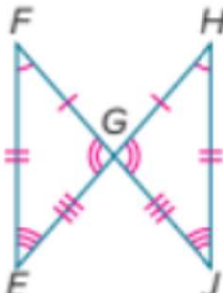
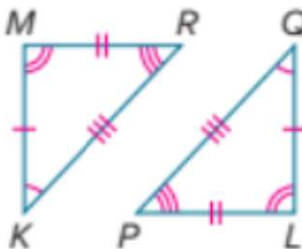
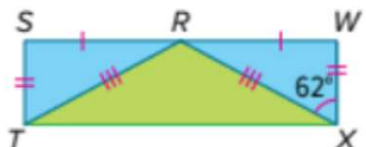
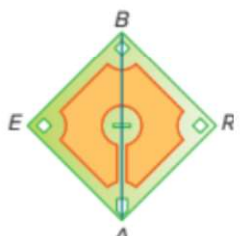
5 main questions

(6 -10) Marks per main question

FRQ

4 • Marks

Paper Part	الجزء الورقي
Show all your work when any answering these questions.	يجب كتابة خطوات الحل التفصيلية للمفردات الاختبارية كافة.

Question	1	السؤال
Write congruence statements comparing the corresponding parts in each set of congruent figures. (Examples 1).		
<p>[1]</p> 	<p>[2]</p> 	P.g 499
<p>[3]</p> 	<p>[4]</p> 	
<p>[5] In the quilt design shown, $\triangle RST \cong \triangle RWX$ If $m \angle WXR = 62^\circ$, What is the measure of $\angle STR$?</p> 		
<p>[6] In the baseball diamond shown, $\triangle BEA \cong \triangle ARB$, The length of \overline{BE} is 90 feet. What is the length of \overline{AR} ? (Example 2)</p> 		

Question

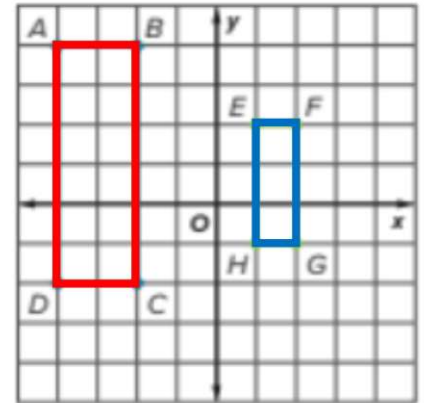
2

السؤال

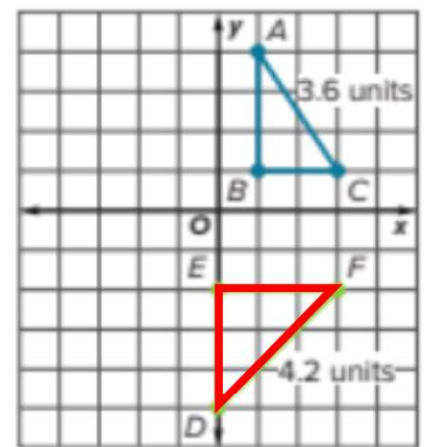
Determine if each pair of figures is similar. If so, describe a sequence of transformations that maps one figure onto the other figure. If not, explain why they are not similar. (Examples 1 and 2)

P.8 511

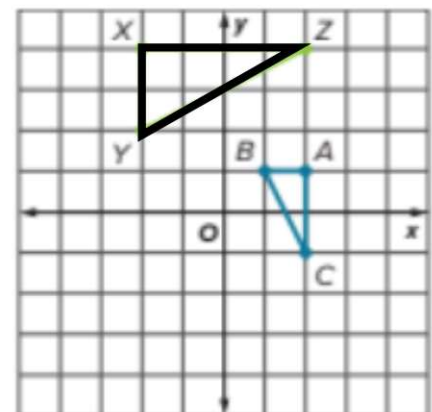
[1]



[2]

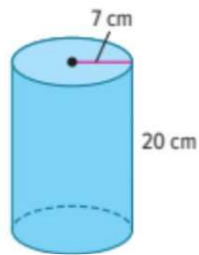


[3] Triangle ΔABC is similar to ΔXYZ . Determine which sequence of transformations maps ΔABC onto ΔXYZ . (Example 3)

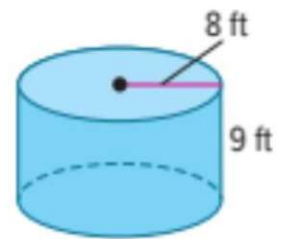


Find the volume of each cylinder. Round to the nearest tenth. (Example 1)

[1]

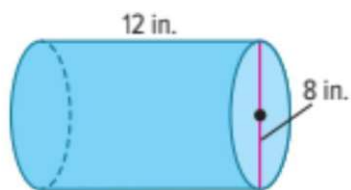


[2]

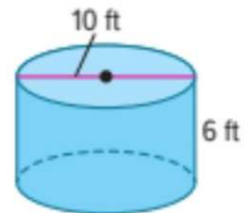


Find the volume of each cylinder. Express your answer in terms of π . (Example 2)

[3]

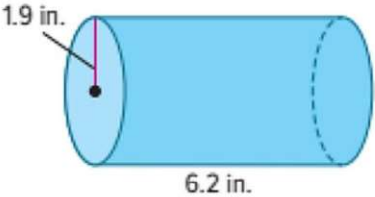


[4]



[5] A wooden toy block is in the shape of a cylinder. The toy block has a height of 4 inches and a diameter of 3 inches. **How much does the toy block weigh if 1 cubic inch of wood weighs 0.55 ounce?** Round to the nearest tenth. (Example 3)

[6] A large rainwater collection tub is shaped like a cylinder. The diameter is 28 inches and the height is 40 inches. If the tub is 75% filled, **what is the volume of water in the tub?** Round to the nearest tenth.

Question	3	السؤال
<p>[7] What is the volume of the cylinder shown? (Use 3.14 for π.) P.g 541</p> <div></div>		
<p>[8] A soup can, shaped like cylinder, has a diameter of 3.5 inches and a height of 5 inches. Each serving of soup is 15 cubic inches. If a can of soup this size costs \$1.99, What is the cost for each serving of soup? Round to the nearest cent. P.g 542</p>		
<p>[9] A large water tank measures 6 feet across and 4 feet high. It is being filled with water at a rate of 10 gallons per minute. About how many hours will it take to fill the pool if 1 cubic foot of water is about 7.5 gallons? Round to the nearest tenth. P.g 542</p>		

Question

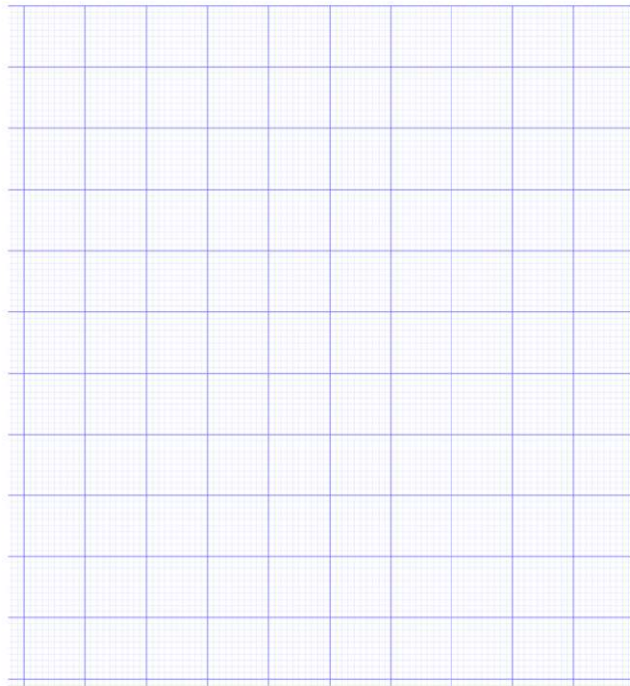
4

السؤال

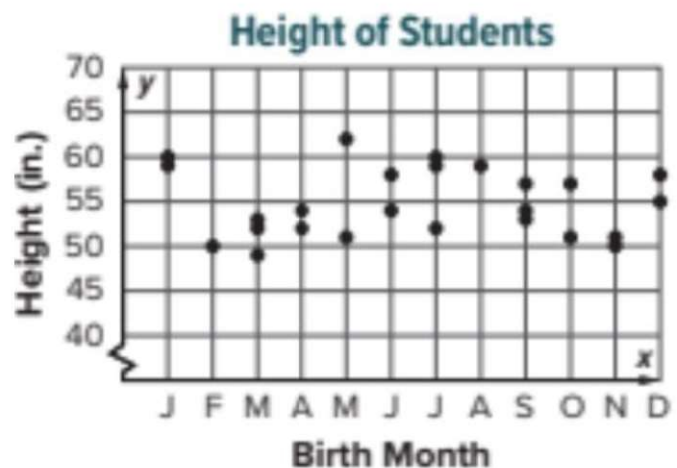
[1] The table shows the average points scored per game by an NBA player in the first ten seasons of his career. Construct a scatter plot of the data. (**Example 1**)

Season	1	2	3	4	5
Average Points Per Game	28.2	22.7	37.1	35.0	32.5
Season	6	7	8	9	10
Average Points Per Game	33.6	31.5	30.1	32.6	26.9

P. 8589



[2] The scatter plot shows the relationship between the number of pieces in a jigsaw puzzle and the number of minutes that are recommended to complete the puzzle. Interpret the scatter plot. (**Example 2**)



Question

5

السؤال

[1] Omar surveyed students at his school. He found that 23 students are in the Chess Club, and 8 of those students are in the Math Club. There are 19 students that are in the Math Club. Ten students are in neither club.

Construct a two-way table summarizing the data.

	Math Club	No Math Club	Total
Chess Club			
No Chess Club			
Total			

P.g 617

[2] The table shows the results of a survey that asked seventh and eighth grade students whether they buy or pack their lunch. **Find the relative frequencies.**

Round to the nearest hundredth. Are seventh graders or eighth graders more likely to buy their lunch? Explain. **(Example 2)**

	Buy Lunch	Pack a Lunch	Total
7th Graders	30	45	75
8th Graders	51	25	76
Total	81	70	151

[3] The table shows the results of a survey about the number of bus riders at McGuffey Junior High. **Find the relative frequencies.**

Round to the nearest hundredth. Are male students or female students more likely to not ride the bus? Explain. **(Example 3)**

	Male	Female	Total
Bus	110	84	194
No Bus	85	42	127
Total	195	126	321



اللهم يا من قلت وقولك الحق (وَعَلَّمَناهُ مِنْ لَدُنَّا عِلْمًا)، ارزقني من لدنك علمًا نافعا يقربني إليك

اللهم يا من قلت وقولك الحق (وَائْتَفَقُوا اللَّهَ وَيُعَلِّمُكُمُ اللَّهُ)،
اجعلني من عبادك المتقين، وعلمي ما ينفعني وانفعني بما علمتني وزدني علمًا .

اللهم أكرمني بجودة الحفظ وسرعة الفهم وثبات العقل والذهن والذاكرة بحق
قولك:
"الرَّحْمَنُ، عَلَّمَ الْقُرْآنَ، خَلَقَ الْإِنْسَانَ، عَلَّمَهُ الْبَيَانَ، الشَّمْسُ وَالْقَمَرُ بِحُسْبَانٍ"

اللهم اني أسألك أدق الاجابات وأعلى الدرجات