ALSHAWAMEKH SCHOOL - ABUDHABI
MATH DEPARTMENT

Grade 11 General

EoT1-MCQ Part

Number of MCQ عدد الأسئلة الموضوعية	20
Marks of MCQ درجة الأسئلة الموضوعية	3

Teacher: Noha Albraiki

REVEAL CURRICULUM
Term 1
2025-2026

It is prohibited to photocopy or circulate this document. Legal actions will be taken against those who violate this rule يُحظر تصوير أو تداول هذه الوثيقة، وسيتم اتخاذ الإجراءات القانونية اللازمة ضد من يخالف ذلك.

Academic Year العام الدراسي	2025/2026
Term الفصل	1
Subject المادة	Mathematics/Reveal الرياضيات/ريفيل
Grade الصف	11
Stream المسار	General العام
Number of MCQ عدد الأسئلة الموضوعية	20
Marks of MCQ درجة الأسئلة الموضوعية	3
Number of FRQ عدد الأسئلة المقالية	6
Marks per FRQ الدرجات للأسئلة المقالية	(6-11)
Type of All Questions نوع كافة الأسئلة	MCQ/ الأسئلة الموضوعية FRQ/ الأسئلة المقالية
Maximum Overall Grade الدرجة القصوى الممكنة	100
Exam Duration - مدة الامتحان	150 minutes
Mode of Implementation - طريقة التطبيق	SwiftAssess & Paper-Based
Calculator الآلة الحاسبة	Allowed مسموحة

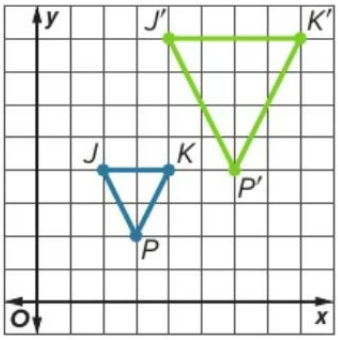
	Question* السؤال*	Learning Outcome/Performance Criteria** نتائج التعلم/ معاييرالأداء**	Reference(s) in the Student Book (English Version) المرجع في كتاب الطالب (النسخة الانجليزية) Example/Exercise مثال/تمرين	Page الصفحة
MCQ - الأسئلة الموضوعية	1	Find the scale factor of a dilation	Exercises (10-18)	P120
	2	Use proportions to identify similar polygons	Exercises (7-10)	P128
	3	Solve problems using the properties of similar polygons	Exercises (11-14)	P128
	4	Use similar triangles to solve problems	Exercises (9-12)	P134
	5	Use proportional parts with parallel lines	Example 5	P144
	6	Recognize and use proportional relationships of corresponding angle bisectors, altitudes, and medians of similar triangles	Exercises (8-9)	P153
	7	Find the geometric mean between two numbers	Exercises (1-6)	P165
	8	Solve problems involving relationships between parts of a right triangle and the altitude to its hypotenuse	Exercises (11-14)	P165
	9	Use the Pythagorean Theorem	Exercises (1-12)	P171
	10	Use the Converse of the Pythagorean Theorem	Exercises (20-22)	P172
	11	Use the Converse of the Pythagorean Theorem	Exercises (20-22)	P172
	12	Find the distance between two points on the coordinate plane	Exercises (13-18)	P177
	13	Find values of trigonometric ratios	Exercises (19-21)	P192
	14	Use the Law of Sines to solve triangles	Exercises (1-6)	P207
	15	Use the Law of Cosines to solve triangles	Exercises (9-14)	P215
	16	Use the Fundamental Counting Principle to count outcomes	Example 6	P368
	17	Represent sample spaces	Example 3	P365
	18	Find the intersection, union, and difference among sets	Example 3	P373
	19	Find probabilities of dependent and independent events and solve related problems	Example 3	P398
	20	Find the probability of mutually and non-mutually exclusive events and solve related problems	Example 2	P406
Number of FRQ عدد الأسئلة المقالية	21	Visualize, describe, and solve problems using the perimeters of similar polygons.	Exercises (11-14)	P128
	22	Solve problems and prove theorems by using triangle proportionality	Exercises (1-6)	P145
	23	Use trigonometric ratios to find side lengths and angle measures of right triangles	Exercises (30-32)	P193
	24	Use trigonometric ratios to find side lengths and angle measures of right triangles	Example 2	P196
	25	Find the intersection, union, and difference among sets	Example 2+3	P374+375
	26	Find probabilities of dependent and independent events and solve related problems	Example 3	P400

* Questions might appear in a different order in the actual exam

1. FIND THE SCALE FACTOR OF A DILATION	EXERCISES (10-18)	P120

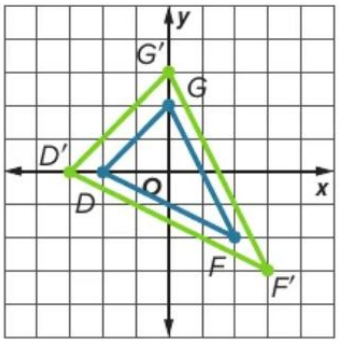
Find The Scale Factor of The Dilation.

10. AJK'P' is the image of AJKP.



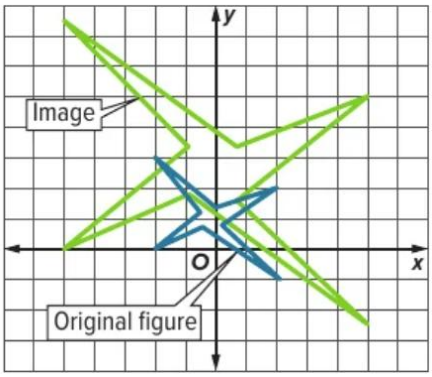
a) 1.5	b) 2
c) 2.5	d) $\frac{2}{3}$

11. AD'F'G' is the image of ADFG.



a) 1.5	b) 2
c) 2.5	d) $\frac{2}{3}$

12. Tyrone drew a logo and a dilation of the same logo on the coordinate plane. What is the scale factor of the dilation?

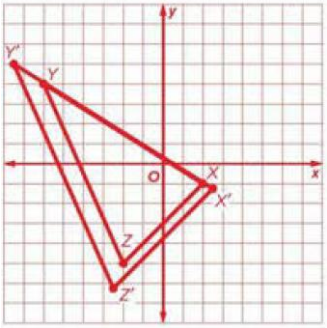


a) 1.5	b) 2
c) 2.5	d) $\frac{2}{3}$

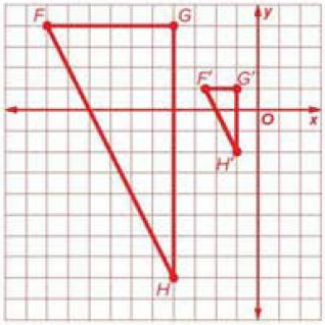
GRAPH THE IMAGE OF EACH POLYGON WITH THE GIVEN VERTICES AFTER A DILATION CENTERED AT THE ORIGIN WITH THE GIVEN SCALE FACTOR.

13. F(-10, 4), G(-4, 4), H(-4, -8), k = 0.25

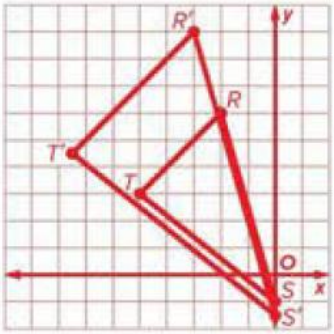
a)



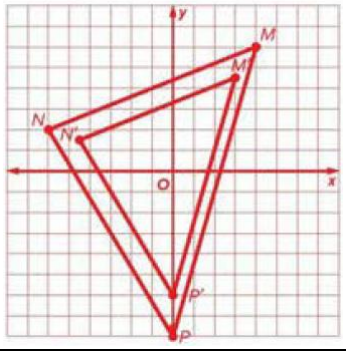
b)

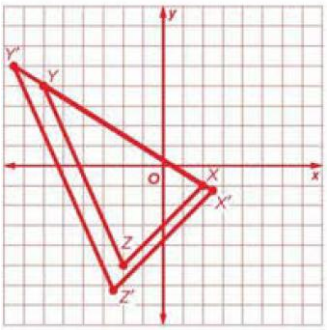
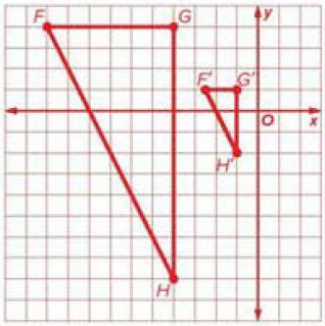
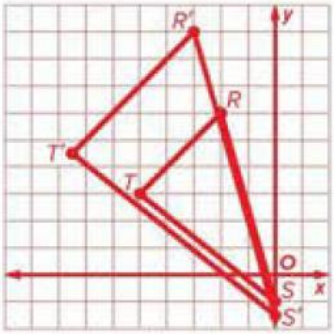
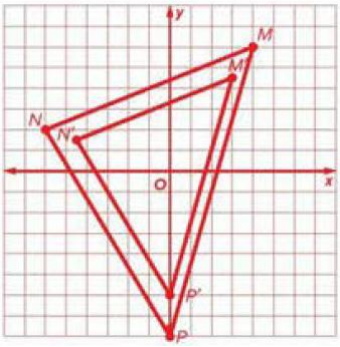
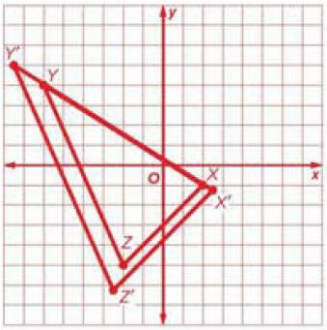
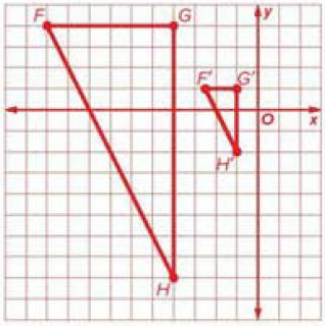
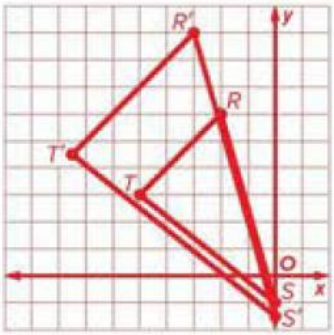
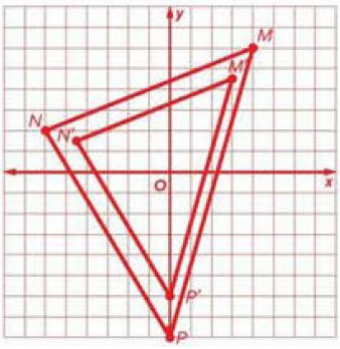


c)

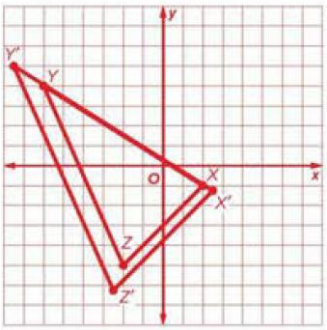


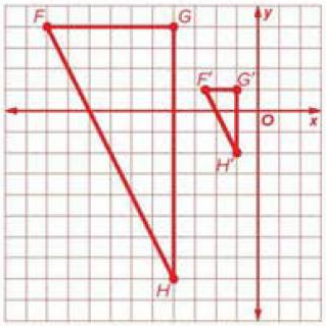
d)

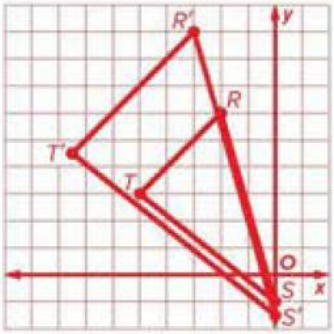


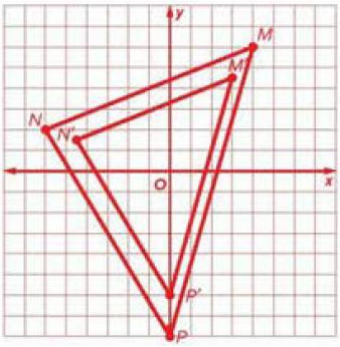
14. X(2, -1), Y(-6, 4), Z(-2,-5), k $=\frac{5}{4}$	a) 	b) 
	c) 	d) 
15. M(4, 6), N(-6, 2), P(0, -8), k $=\frac{3}{4}$	a) 	b) 
	c) 	d) 

16. R(-2, 6), S(0, -1), T(-5, 3), k = 1.5

a)


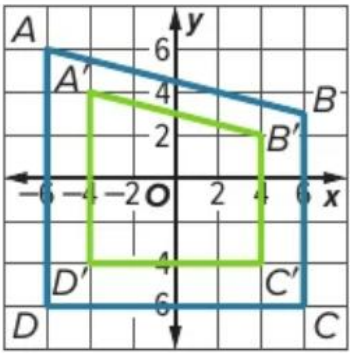
b)


c)


d)


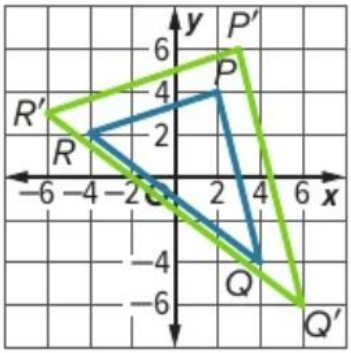
Find The Scale Factor of The Dilation.

17. A'B'C'D' is the image of ABCD.



a) 1.5	b) 2
c) 2.5	d) $\frac{2}{3}$

18. AP'Q'R' is the image of APQR.

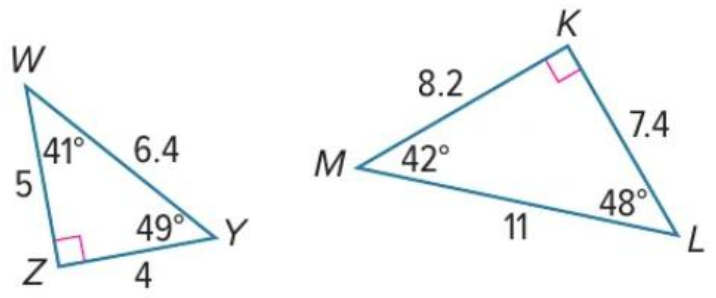


a) 1.5	b) 2
c) 2.5	d) $\frac{2}{3}$

2. Use proportions to identify similar polygons	Exercises (7-10)	P128

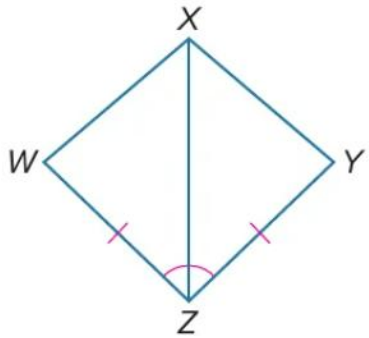
Determine whether each pair of figures is similar. If so, find the scale factor. Explain your reasoning.

7.



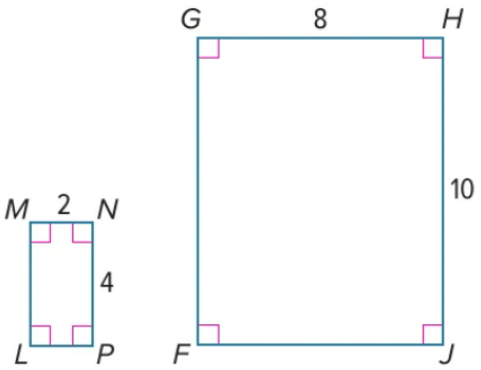
a) $\frac{1}{4}$	b) 1
c) $\frac{3}{5}$	d) Not Similar

8.



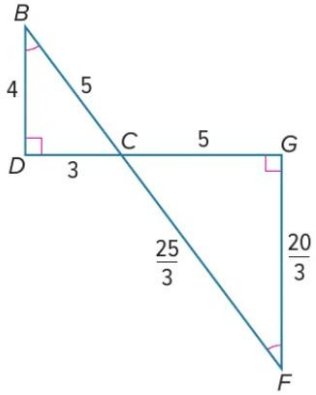
a) $\frac{1}{4}$	b) 1
c) $\frac{3}{5}$	d) Not Similar

9.



a) $\frac{1}{4}$	b) 1
c) $\frac{3}{5}$	d) Not Similar

10.

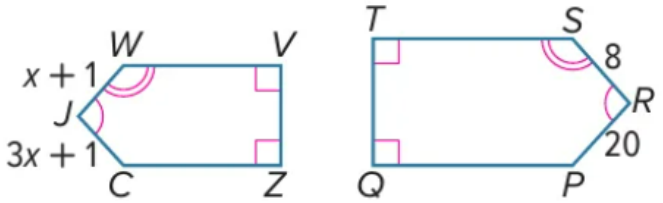


a) $\frac{1}{4}$	b) 1
e) $\frac{3}{5}$	f) Not Similar

3. SOLVE PROBLEMS USING THE PROPERTIES OF SIMILAR POLYGONS	EXERCISES (11-14)	P128

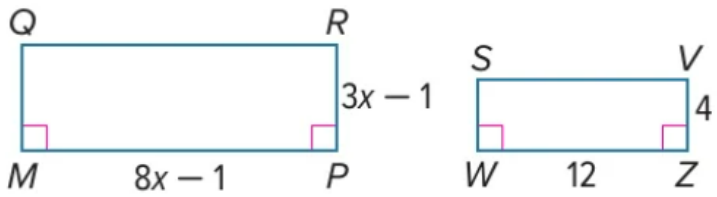
Each Pair of Polygons is Similar. Find the value of x

11.



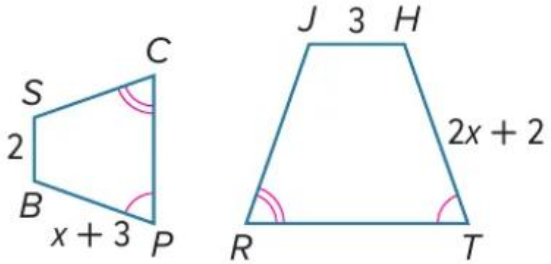
a) 2	b) 5		
c) 7	d) 3		

12.



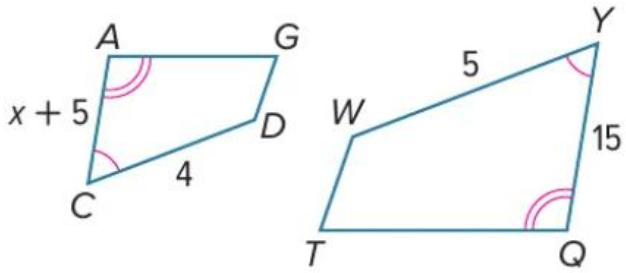
a) 2	b) 5
c) 7	d) 3

13.



a) 2	b) 5		
c) 7	d) 3		

14.

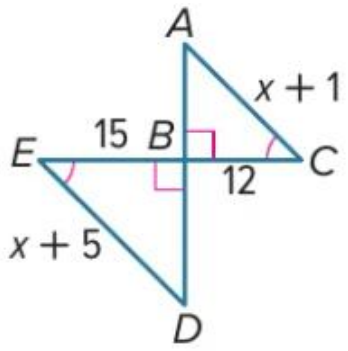


a) 2	b) 5
c) 7	d) 3
e) 7	f) 3

4. USE SIMILAR TRIANGLES TO SOLVE PROBLEMS	EXERCISES (9-12)	P134

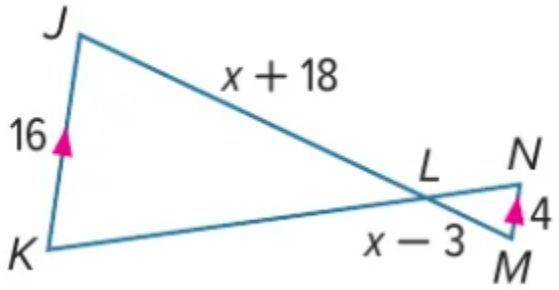
Identify similar triangles, then find each measure.

9. AC

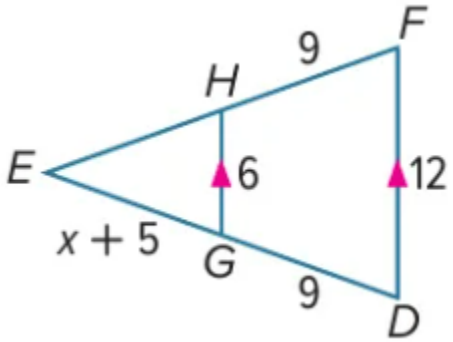


a) 9	b) 28	a) 9	b) 28
c) 16	d) 5.4	c) 16	d) 5.4

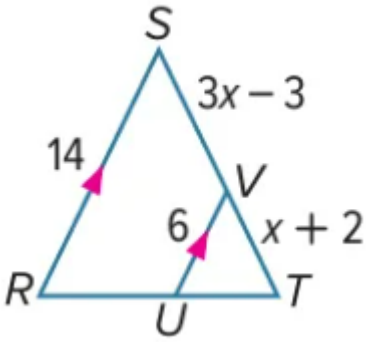
10. JL



11. EH



12. VT

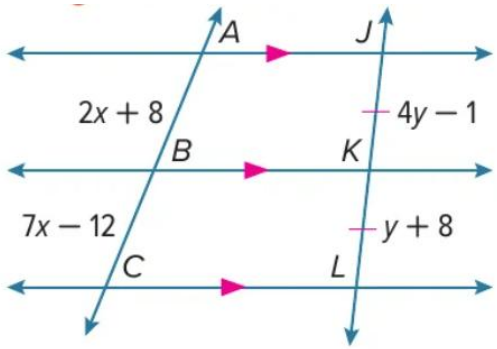


a) 9	b) 28	a) 9	b) 28
c) 16	d) 5.4	c) 16	d) 5.4

5. USE PROPORTIONAL PARTS WITH PARALLEL LINES	EXAMPLE 5	P144

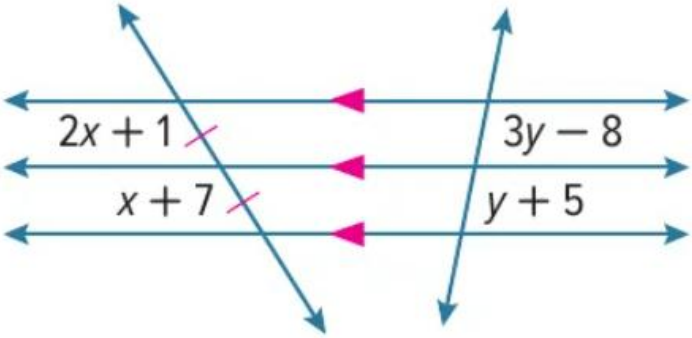
Example 5: Use Congruent Segment of Transversals
Find the values of x and y

EXAMPLE 5



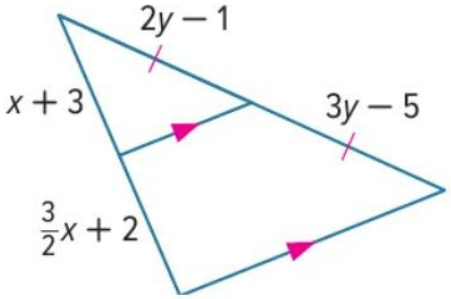
a) x=3, y=6	b) x=6, y=6.5
c) x=2, y=4	d) x=4, y=3

11.



a) x=3, y=6	b) x=6, y=6.5
c) x=2, y=4	d) x=4, y=3

12.

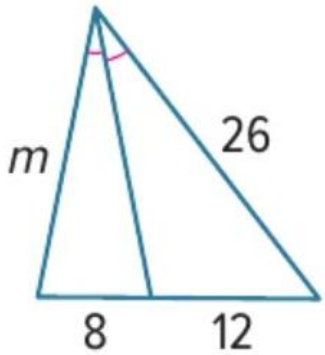


a) x=3, y=6	b) x=6, y=6.5
c) x=2, y=4	d) x=4, y=3

6. Recognize and use proportional relationships of corresponding angle bisectors, altitudes, and medians of similar triangles	Exercises (8-9)	P153

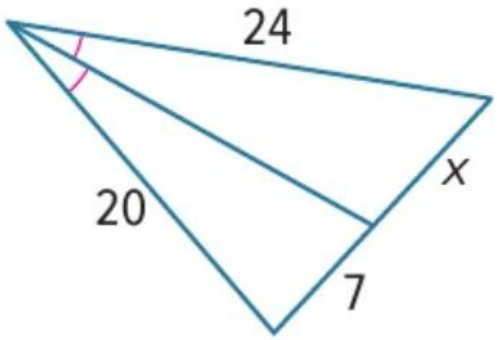
Find the value of each variable to the nearest tenth

8.



a) 20.7	b) 8.4	a) 20.7	b) 8.4
c) 17.3	d) 2.1	c) 17.3	d) 2.1

9.



7. Find the geometric mean between two numbers	Exercises (1-6)	P165

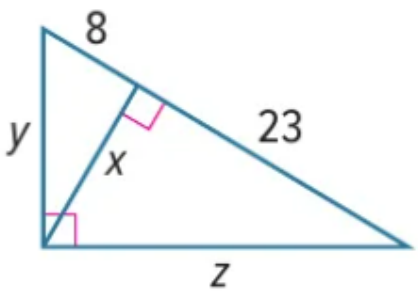
Find the geometric mean between each pair of numbers.

1. 4 and 6	a) 10	b) 15.5
	c) 4.9	d) 1
2. $\frac{1}{2}$ and 2	a) 10	b) 15.5
	c) 4.9	d) 1
3. 4 and 25	a) 10	b) 15.5
	c) 4.9	d) 1
4. 12 and 20	a) 10	b) 15.5
	c) 4.9	d) 1
5. 17 and 3	a) 10	b) 1.5
	c) 8.5	d) 7.1
6. 3 and 24	a) 8.5	b) 15.5
	c) 4.9	d) 1.6

8. SOLVE PROBLEMS INVOLVING RELATIONSHIPS BETWEEN PARTS OF A RIGHT TRIANGLE AND THE ALTITUDE TO ITS HYPOTENUSE	EXERCISES (11-14)	P165

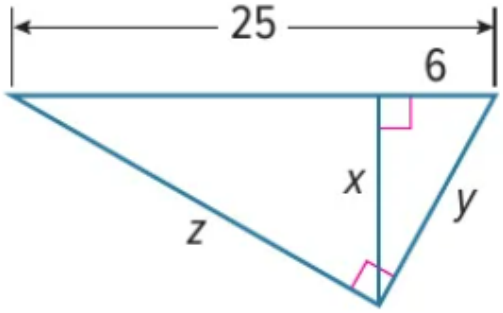
Find the values of x,y and z.

11.



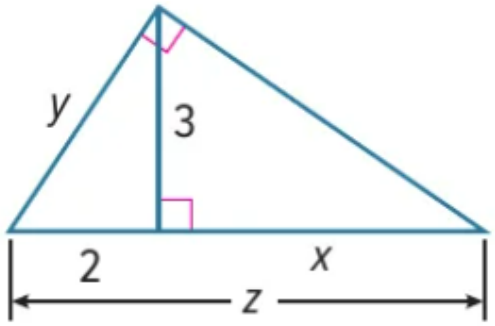
a) x=4.5, y=3.6, z=6.5	b) x=13.6, y=15.7, z=26.7
c) x=15, y=5, z=17.3	d) x=10.7, y=12.2, z=21.8

12.



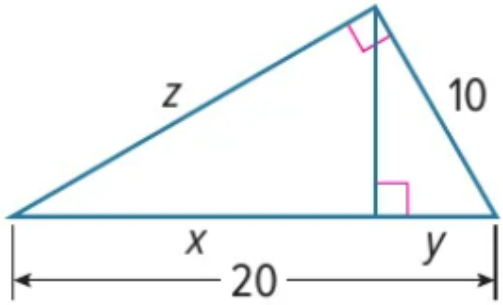
a) x=4.5, y=3.6, z=6.5	b) x=13.6, y=15.7, z=26.7
c) x=15, y=5, z=17.3	d) x=10.7, y=12.2, z=21.8

13.



a) x=4.5, y=3.6, z=6.5	b) x=13.6, y=15.7, z=26.7
c) x=15, y=5, z=17.3	d) x=10.7, y=12.2, z=21.8

14.

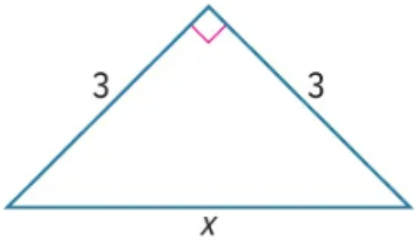


a) x=4.5, y=3.6, z=6.5	b) x=13.6, y=15.7, z=26.7
c) x=15, y=5, z=17.3	d) x=10.7, y=12.2, z=21.8

9. Use the Pythagorean Theorem	Exercises (1-12)	P171

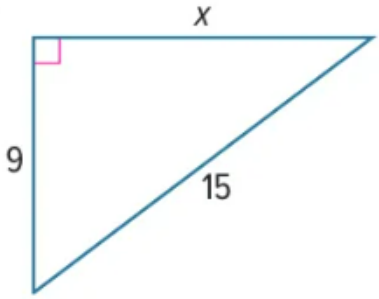
Find the values of x.

1.

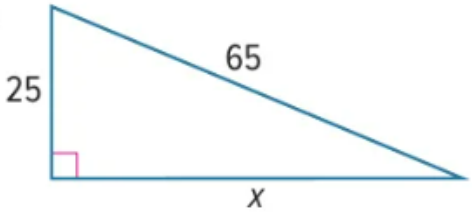


a) 60	b) $\frac{1}{3}$	a) 60	b) $\frac{1}{3}$
c) 4.2	d) 12	c) 4.2	d) 12

2.

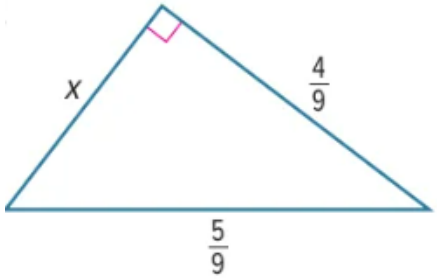


3.

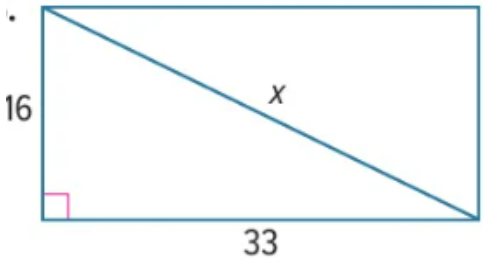


a) 60	b) $\frac{1}{3}$	a) 60	b) $\frac{1}{3}$
c) 4.2	d) 12	c) 4.2	d) 12

4.

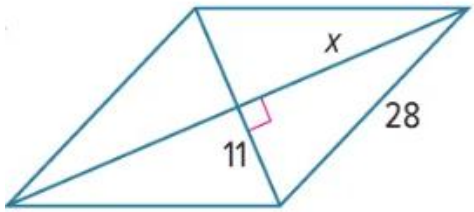


5.

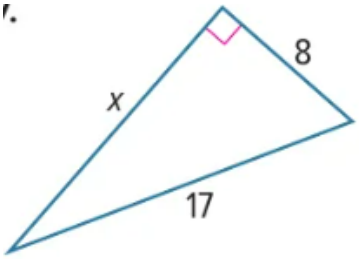


a) 15	b) 36.7	a) 15	b) 36.7
c) 51	d) 25.7	c) 51	d) 25.7

6.

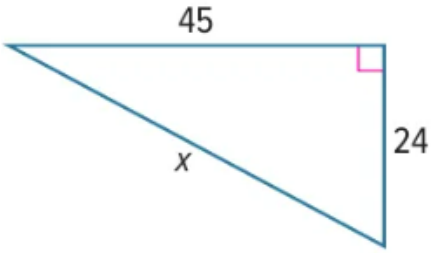


7.

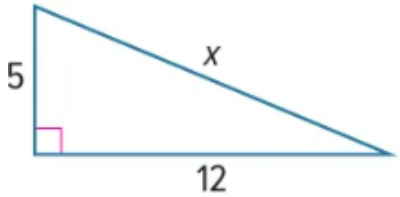
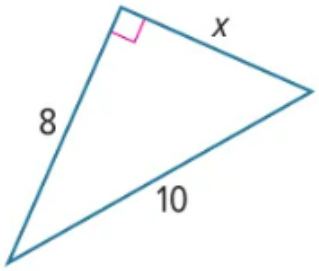
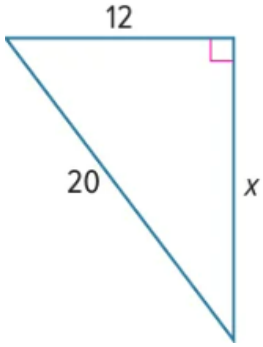


a) 15	b) 36.7	a) 15	b) 36.7
c) 51	d) 25.7	c) 51	d) 25.7

8.



a) 15	b) 36.7	a) 15	b) 36.7
c) 51	d) 25.7	c) 51	d) 25.7

9.		**10.** 	
a) 100	b) 13	a) 100	b) 13
c) 16	d) 6	c) 16	d) 6
11. 		**12.** 	
a) 100	b) 13	a) 100	b) 13
c) 16	d) 6	c) 16	d) 6

10/11. Use the Converse of the Pythagorean Theorem	Exercises (20-22)	P172

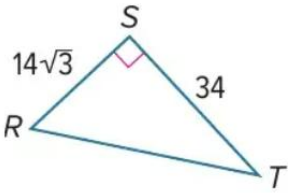
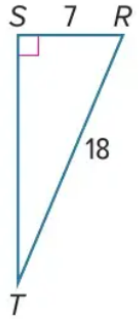
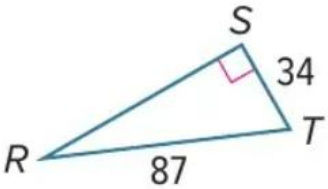
Determine whether each set of measures can be the measures of the sides of a triangle. If so, classify the triangle as acute, obtuse, or right. Justify your answer.		
20. $\sqrt{5}, \sqrt{12}, \sqrt{13}$	a) Acute	b) Right
	c) Obtuse	d) Not Form a triangle
21. $2, \sqrt{8}, \sqrt{12}$	a) Acute	b) Right
	c) Obtuse	d) Not Form a triangle
22. $9, 40, 41$	a) Acute	b) Right
	c) Obtuse	d) Not Form a triangle

12. Find the distance between two points on the coordinate plane.	Exercises (13-18)	P177

Determine the coordinates of the midpoint M of the segment joining each pair of points.		
13. K(-2,-4,-4) and L(4, 2, 0)	a) (2,3,-4)	b) (-1,1,2)
	c) $(4,\frac{7}{2},\frac{17}{2})$	d) (1,-1,-2)
14. W(-1, -3, -6) and Z(-1, 5, 10)	a) (2,3,-4)	b) (-1,1,2)
	c) $(4,\frac{7}{2},\frac{17}{2})$	d) (1,-1,-2)
15. R(3, 3, 4) and V(5, 4, 13)	a) (2,3,-4)	b) (-1,1,2)
	c) $(4,\frac{7}{2},\frac{17}{2})$	d) (1,-1,-2)
16. A(4, 6, -8) and B(0, 0, 0)	a) (2,3,-4)	b) (-1,1,2)
	c) $(4,\frac{7}{2},\frac{17}{2})$	d) (1,-1,-2)
17. C(8, 7, 11) and D(2, 1, 8)	a) (3,-4,5)	b) $(2,-4,\frac{3}{2})$
	c) $(5,4,\frac{19}{2})$	d) (1,-1,3)
18. T(-1, -7, 9) and U(5, -1, -6)	a) (3,-4,5)	b) $(2,-4,\frac{3}{2})$
	c) $(5,4,\frac{19}{2})$	d) (1,-1,3)

13. Find values of trigonometric ratios.	Exercises (19-21)	P192

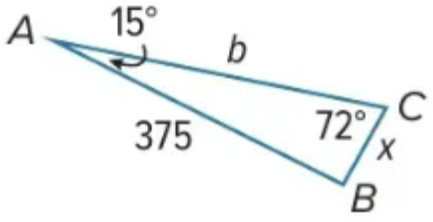
Use a calculator to find m∠T to the nearest tenth.

19. 	a) 22.9°	b) 35.5°
	c) 67°	d) 30.4°
20. 	a) 22.9°	b) 35.5°
	c) 67°	d) 30.4°
21. 	a) 22.9°	b) 35.5°
	c) 67°	d) 30.4°

14. Use the Law of Sines to solve triangles	Exercises (1-6)	P207

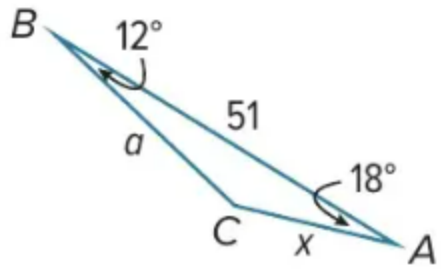
Find the values of x.

1.



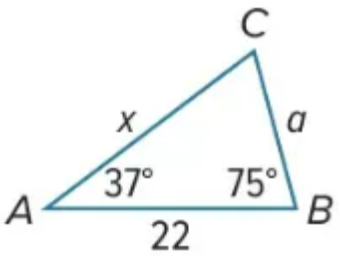
a) 22.9	b) 102.1
c) 21.2	d) 35.1

2.



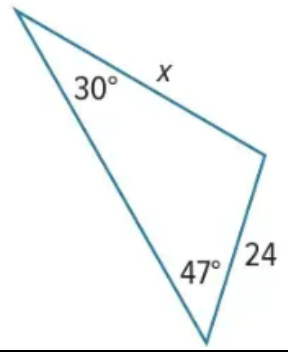
a) 22.9	b) 102.1
c) 21.2	d) 35.1

3.



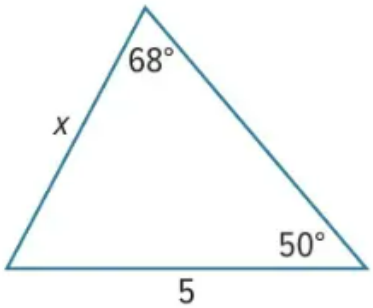
a) 22.9	b) 102.1
c) 21.2	d) 35.1

4.



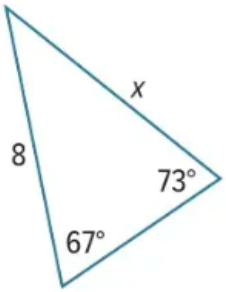
a) 22.9	b) 102.1
c) 21.2	d) 35.1

5.



a) 4.1	b) 22.8
c) 15.1	d) 7.7

6.

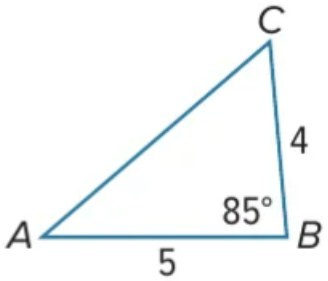


a) 4.1	b) 22.8
c) 15.1	d) 7.7

15. USE THE LAW OF COSINES TO SOLVE TRIANGLES	EXERCISES (9-14)	P215

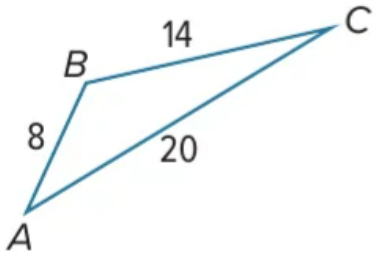
REASONING. Solve each triangle. Round side lengths to the nearest tenth and angle measures to the nearest degree.

9.

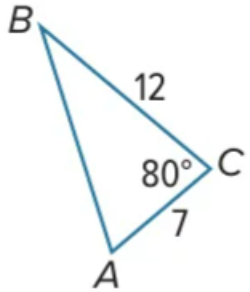


a) $m\angle A=33$ $m\angle C=18$ $b = 129$	b) $m\angle A=41$ $m\angle C=54$ $b = 6.1$	a) $m\angle A=33$ $m\angle C=18$ $m\angle B= 129$	b) $m\angle A=41$ $m\angle C=54$ $m\angle B = 6.1$
c) $m\angle A=67$ $m\angle C=33$ $b = 12.8$	d) $m\angle A=30$ $m\angle C=42$ $b = 108$	c) $m\angle A=67$ $m\angle C=33$ $m\angle B= 12.8$	d) $m\angle A=30$ $m\angle C=42$ $m\angle B= 108$

10.

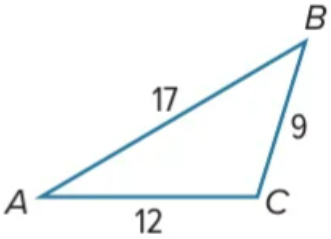


11.

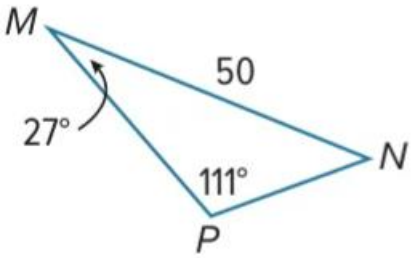


a) $m\angle A=33$ $m\angle B=18$ $c= 129$	b) $m\angle A=41$ $m\angle B=54$ $c= 6.1$	a) $m\angle A=33$ $m\angle B=18$ $m\angle C= 129$	b) $m\angle A=41$ $m\angle B=54$ $m\angle C = 6.1$
c) $m\angle A=67$ $m\angle B=33$ $c= 12.8$	d) $m\angle A=30$ $m\angle B=42$ $c = 108$	c) $m\angle A=67$ $m\angle C=33$ $m\angle B= 12.8$	d) $m\angle A=30$ $m\angle B=42$ $m\angle C= 108$

12.

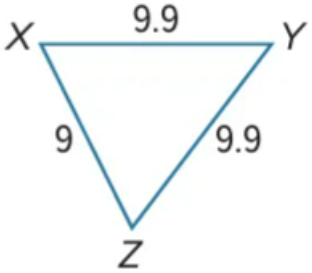


13.



a) $m\angle N=33$ $m=18$ $n = 129$	b) $m\angle N=42$ $m=35.8$ $n = 24.3$	a) $m\angle X=54$ $m\angle Y=18$ $m\angle Z= 63$	b) $m\angle X=41$ $m\angle Y=54$ $m\angle Z = 54$
c) $m\angle N=33$ $m=63$ $n = 54$	d) $m\angle N=42$ $m=76$ $n = 2.3$	c) $m\angle X=63$ $m\angle Y=63$ $m\angle Z= 54$	d) $m\angle X=30$ $m\angle Y=42$ $m\angle Z= 108$

14.



16. Use the Fundamental Counting Principle to count outcomes	Example 4	P368

Santiago lists the number of sections available for the courses he will take in his first semester at college. How many different schedules could Santiago create for this semester?

Course	Sections Offered
Art History	6
French	5
Mathematics	9
Art	4
English	6

a) 6982	b) 7369
c) 6489	d) 7392

A sneaker company lets you customize your own sneaker on their Web site. Using their most popular sneaker as the base, you have the option to customize the color of each part of the sneaker.

<u>Part A</u> Which is the best estimate for the number of possible customizations?

a) 100	b) 3,600,000
c) 5,062,500	d) 36,000,000

<u>Part B</u> How many different customizations can be created?

a) 4,844,160	b) 3,605,700
c) 450,900	d) 50,000

17. Represent sample spaces	Example 1	P365

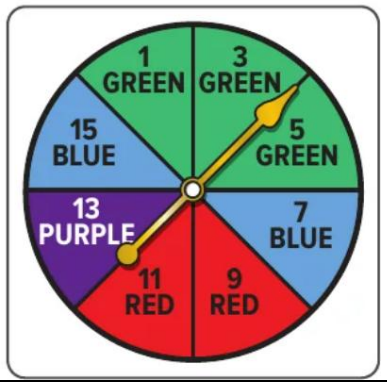
A fair die is tossed once.			
A. What is the sample space of the experiment?		B. What is the sample space for the event of rolling a prime number? Write the outcomes to complete the sample space.	
a) S={1,2,3}	b) S={2,3,5}	a) S={1,2,3}	b) S={2,3,5}
c) S={6}	d) S={1,2,3,4,5,6}	c) S={6}	d) S={1,2,3,4,5,6}

18. Find the intersection, union, and difference among sets	Example 1	P373

A fair die is rolled once. Let A be the event of rolling an odd number, and let B be the event of rolling a number greater than 3. Find A∩B.	
a) 3	b) 4
c) 6	d) 5

Check

Let A be the event of the spinner landing on a blue section, and let B be the event of the spinner landing on a section with a number divisible by 3. What are the possible outcomes of each event?



A = {7, ?}
B = {3, _?, 15}
A∩B={? }

19. Find probabilities of dependent and independent events and solve related problems	Example 1	P398

Ana is a member of a gaming Web site that randomly pairs users together to solve puzzles. Of the 50 other players currently online, Ana is friends with 10 of them. Suppose Ana is paired with a player for a game. Not liking the outcome, she disconnects and is paired with another player.		
a. What is the probability that neither player that Ana is paired with is a friend of hers?		b. What assumption do you have to make in order to solve this problem?
a) 10%	b) 22%	
c) 43%	d) 64%	

Check WEATHER Paola's weather app tells her that there is a 20% chance of rain on Tuesday and a 50% chance of rain on Wednesday. What is the probability that it will rain on both Tuesday and Wednesday?	
a) 10%	b) 22%
c) 43%	d) 64%

20. Find the probability of mutually and non-mutually exclusive events and solve related problems	Example 2	P406

A card is drawn from a standard deck of 52 cards. Determine whether the events are <u>mutually</u> exclusive or <u>not mutually</u> exclusive. Explain your reasoning.	
a. drawing a 3 or a 2	
a) Mutually	b) Not Mutually
b. drawing a 7 or a red card	
a) Mutually	b) Not Mutually
c. drawing a queen or a spade	
a) Mutually	b) Not Mutually

ALSHAWAMEKH SCHOOL - ABUDHABI
MATH DEPARTMENT

Grade 11 General

EoT1-FRQ Part

Number of FRQ عدد الأسئلة المقالية	21	M3L2	Visualize, describe, and solve problems using the perimeters of similar polygons.	Exercises (11-14)	P128
	22	M3L5	Solve problems and prove theorems by using triangle proportionality	Exercises (1-6)	P145
	23	M4L5	Use trigonometric ratios to find side lengths and angle measures of right triangles	Exercises (30-32)	P193
	24	M4L6	Use trigonometric ratios to find side lengths and angle measures of right triangles	Example 2	P196
	25	M7L2	Find the intersection, union, and difference among sets	Example 2+3	P374+375
	26	M7L5	Find probabilities of dependent and independent events and solve related problems	Example 3	P400

Number of FRQ عدد الأسئلة المقالية	6
Marks per FRQ الدرجات للأسئلة المقالية	(6-11)

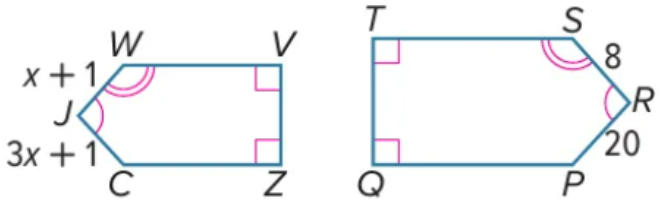
Teacher: Noha Albraiki

REVEAL CURRICULUM
Term 1
2025-2026

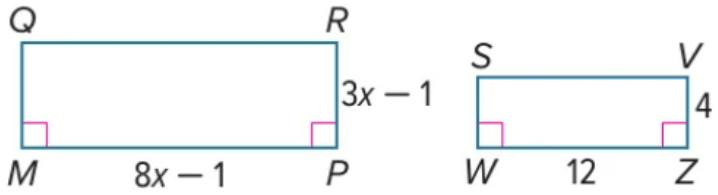
21. Visualize, describe, and solve problems using the perimeters of similar polygons.	Exercises (11-14)	P128

Each Pair of Polygons is Similar. Find the value of x

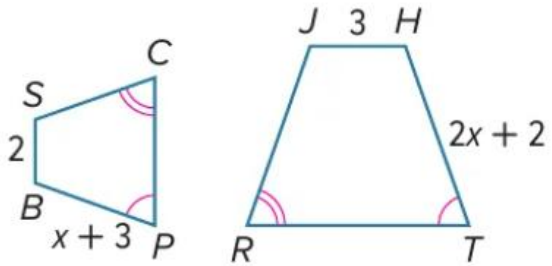
11.



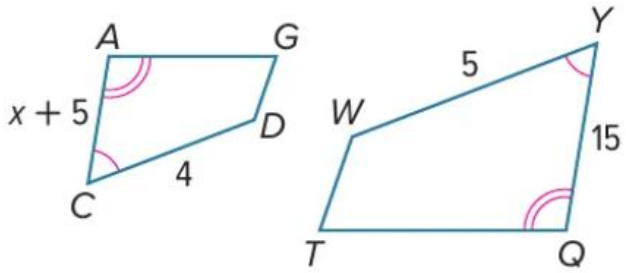
12.



13.

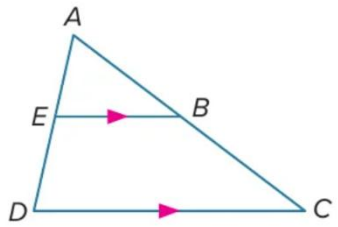


14.



Example 1

Use the figure at the right.

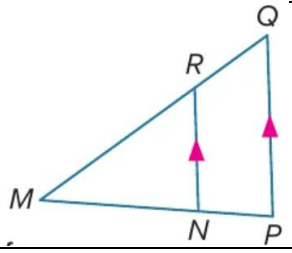


1. If AB = 6, BC= 4, and AE = 9, find ED.

2. If AB = 12, AC = 16, and ED = 5, find AE.

Example 2

Determine whether $\overline{NR} \parallel \overline{PQ}$. Justify your answer.

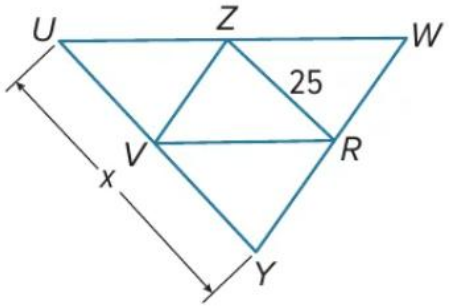


3. PM=18, PN=6, QM = 24, and RM = 16

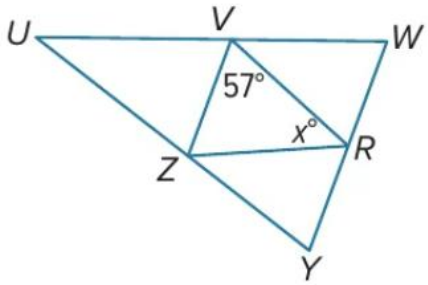
4. QM = 31, RM = 21, and PM = 4PN

VR, VZ, and ZR are midsegments of AUWY. Find the value of x.

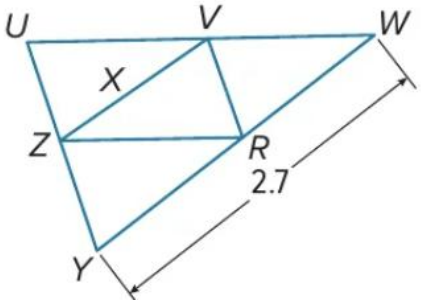
5.



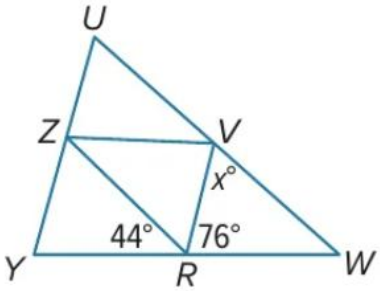
6.



7.



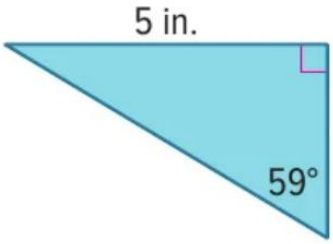
8.



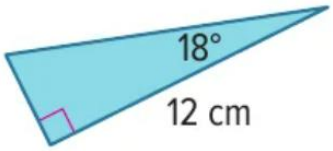
23. USE TRIGONOMETRIC RATIOS TO FIND SIDE LENGTHS AND ANGLE MEASURES OF RIGHT TRIANGLES	EXERCISES (30-32)	P193

Find the Perimeter and Area of Each Triangle. Round to the nearest hundredth

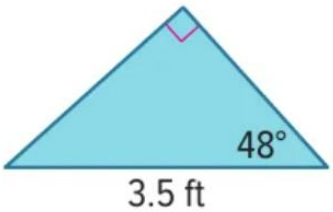
30.



31.

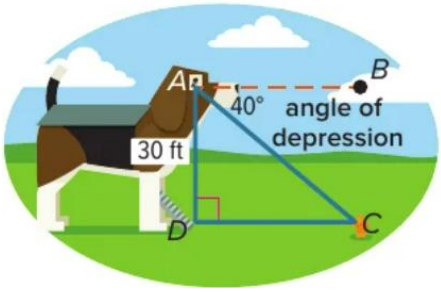


32.



Example 2: Angle of Depression

SIGHTSEEING Cottonwood, Idaho's Dog Bark Park Inn is a popular tourist attraction featuring a hotel in the shape of a 30-foot wood-carved beagle. Pedro looks out the window 30 feet from the ground and spots a fire hydrant on the ground at an estimated angle of depression of 40°. What is the horizontal distance from Pedro to the hydrant to the nearest foot?

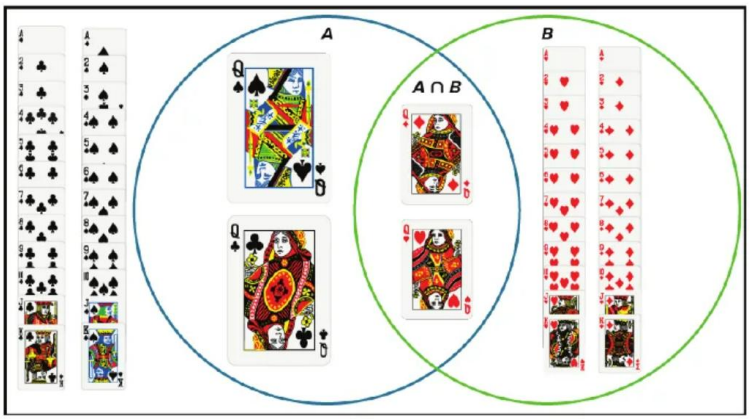


CHECK

LIFEGUARDING Braylen stands on an 8-foot platform and sights a swimmer at an angle of depression of 5°. If Braylen is 6 feet tall, how far away is the swimmer from the base of the platform to the nearest foot?

Example 2: Find Probability of Intersections

PLAYING CARDS A card is selected from a standard deck of cards. What is the probability that the card is a queen and is red?



Example 3: Find Probability of Intersections

A fair die is rolled once. Let A be the event of rolling a number less than 5, and let B be the event of rolling a multiple of 2. Find A∪B.

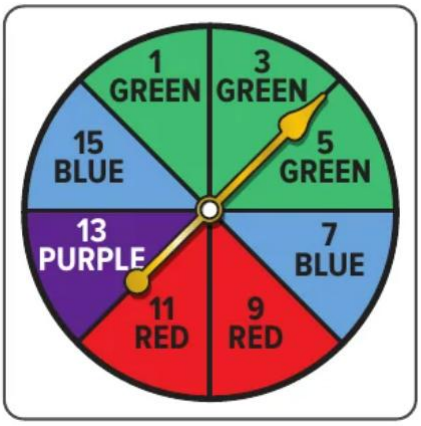
CHECK

Let A be the event of the spinner landing on a blue section, and let B be the event of the spinner landing on a section with a number divisible by 3. What are the possible outcomes of each event?

A = (7, _?_)

B = (3, _?_, 15)

A∪B = (3, 7, 9, _?_)



Example 3: Probability of Dependent Events

FOOD The pizza that Jose and Tessa are eating has 10 slices and is half cheese, half mushroom. Tessa spins the pizza around and randomly selects a slice of mushroom pizza. If Jose spins the pizza and selects a slice after that, what is the probability that both he and Tessa select a slice of mushroom pizza?

CHECK

SCHOOL On a math test, 5 out of 20 students got all the questions correct. If three students are chosen at random without replacement, what is the probability that all three got all the questions correct on the test?