

تم تحميل هذا الملف من موقع المناهج الإماراتية



تجميع أسئلة متنوعة وفق الهيكل الوزاري منهج ريفيل

موقع المناهج ← المناهج الإماراتية ← الصف العاشر المتقدم ← رياضيات ← الفصل الأول ← ملفات متنوعة ← الملف

تاريخ إضافة الملف على موقع المناهج: 20:12:27 2024-11-29

ملفات اكتب للمعلم اكتب للطالب الاختبارات الكترونية | اختبارات | حلول | عروض بوربوينت | أوراق عمل
منهج انجليزي | ملخصات وتقارير | مذكرات وبنوك | الامتحان النهائي للمدرس

المزيد من مادة
رياضيات:

إعداد: عصام الدبايه

التواصل الاجتماعي بحسب الصف العاشر المتقدم



الرياضيات



اللغة الانجليزية



اللغة العربية



التربية الاسلامية



المواد على تلغرام

صفحة المناهج
الإماراتية على
فيسبوك

المزيد من الملفات بحسب الصف العاشر المتقدم والمادة رياضيات في الفصل الأول

حل تجميع أسئلة وفق الهيكل الوزاري منهج بريدج المسار المتقدم

1

حل تجميع أسئلة وفق الهيكل الوزاري منهج ريفيل المسار المتقدم

2

عرض بوربوينت تجميع أسئلة صفحات الكتاب وفق الهيكل الوزاري

3

ملزمة أسئلة مراجعة وفق الهيكل الوزاري منهج بريدج

4

حل ملزمة أسئلة مراجعة وفق الهيكل الوزاري منهج ريفيل

5

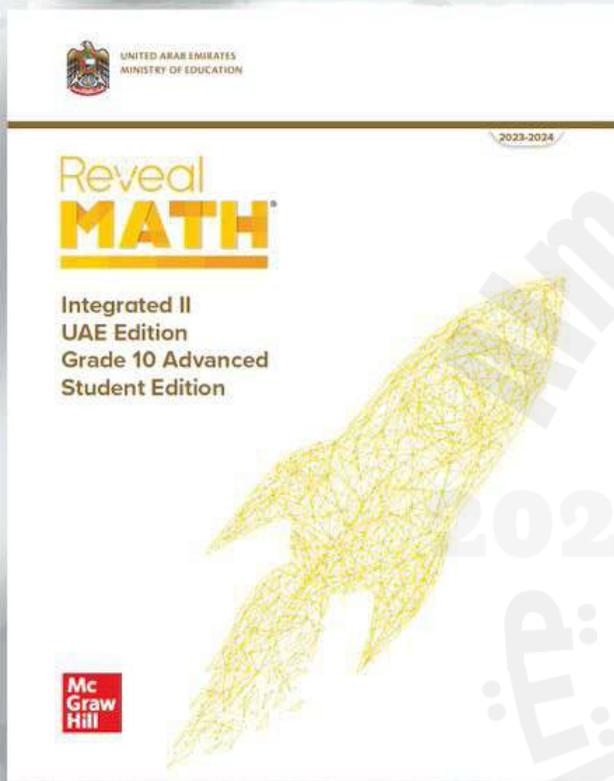


مؤسسة الإمارات
للتعليم المدرسي
EMIRATES SCHOOLS
ESTABLISHMENT



10 ADV.

MATH DEF.

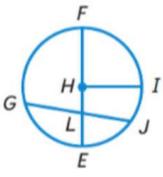


ملف وفيدوهات أسئلة الريتل

عاشر متقدم فصل أول .

Eot1 - Math .

عصام الدبايبه



Math DEF.

قم بعمل مسح للصفحة المطلوبة للوصول إلى الفيديو.

Page 1.



Page 2.



Page 3.



Page 4.



Page 8,9.



Page 10,11.



Page 12.

سيتم رفعه لاحقاً

Page 13,14.



Page 15,16.



Page 17.



Page 18, 19.



Page 20.



Page 21.

سيتم رفعه لاحقاً

Page 22.



Page 23,24,25.



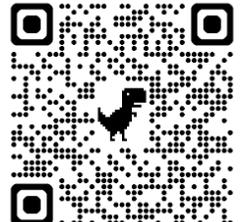
Page 26.



Page 27.



Page 28.



Page 29.



Page 30.

سيتم رفعه لاحقاً

Page 31.

سيتم رفعه لاحقاً

Page 32. ,



Page 7.



اخر التحديثات هنا



الأُسئلةُ المُقالبيّةُ.



FRQ

5-10 MARKS.

10

GEN.

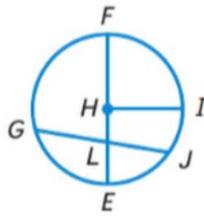
5 QUESTIONS.



مؤسسة الإمارات
للتعليم المدرسي
EMIRATES SCHOOLS
ESTABLISHMENT

MATH DEF.

عصام الدباييه.



1.a. Factor polynomials by using the distributive property.

FRQ

Page 666.

Factor each polynomials .

a. $7x + 49$

b. $8m - 6$

c. $5a^2 - 15$

d. $10q - 25q^2$

e. $a^2b^2 + a$

f. $x + x^2y + x^3y^2$

g. $3p^2r^2 + 6pr + p$

h. $4a^2b^2 + 16ab + 12a$

i. $10h^3n^3 - 2hn^2 + 14hn$

j. $48a^2b^2 - 12ab$

k. $6x^2y - 21y^2w + 24xw$

l. $x^2 + 3x + x + 3$

m. $2x^2 - 5x + 6x - 15$

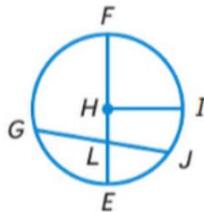
n. $3n^2 + 6np - np - 2p^2$

o. $4x^2 - 1.2x + 0.5x - 0.15$

p. $9x^2 - 3xy + 6x - 2y$

q. $3x^2 + 24x - 1.5x - 12$

r. $2x^2 - 0.6x + 3x - 0.9$



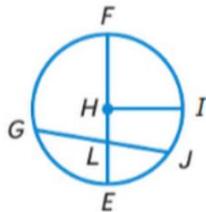
1.b. Factor Trinomials of the form $ax^2 + bx + c$

FRQ

page 672

Factor each polynomial, if possible, if the polynomial cannot be factored using integers, write prime.

a. $5x^2 + 34x + 24$	b. $2x^2 + 19x + 24$	c. $4x^2 + 22x + 10$	d. $4x^2 + 38x + 70$
e. $2x^2 - 3x - 9$	f. $4x^2 - 13x + 10$	g. $2x^2 + 3x + 6$	h. $5x^2 + 3x + 4$
i. $12x^2 + 69x + 45$	j. $4x^2 - 5x + 7$	k. $3x^2 - 8x + 15$	l. $5x^2 + 23x + 24$
m. $2x^2 + 3x - 6$	n. $2t^2 + 9t - 5$	o. $2y^2 + y - 1$	p. $4h^2 + 8h - 5$



1.c. Factor binomials that are differences of squares.

FRQ

Page 679.

Factor each polynomial.

a. $q^2 - 121$

b. $r^4 - k^4$

c. $w^4 - 625$

d. $r^2 - 9t^2$

e. $h^4 - 256$

f. $2x^3 - x^2 - 162x + 81$

g. $x^2 - 4y^2$

h. $3c^3 + 2c^2 - 147c - 98$

i. $f^3 + 2f^2 - 64f - 128$

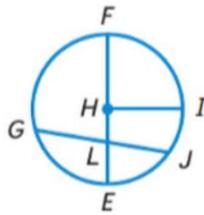
j. $r^3 - 5r^2 - 100r + 500$

k. $3t^3 - 7t^2 - 3t + 7$

l. $a^2 - 49$

m. $4m^3 + 9m^2 - 36m - 81$

n. $3x^3 + x^2 - 75x - 25$



2. Determine whether quadrilaterals are rectangles, rhombi or squares.

FRQ

Page 95, 97

a. Quadrilateral ABCD is a rhombus. Find each value or measure.

1. If $m\angle ABD = 60$, Find $m\angle BDC$

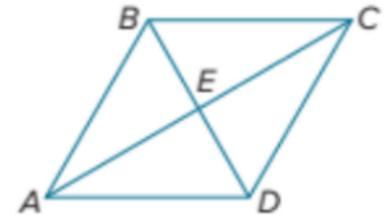
2. If $AE = 8$, find AC .

3. if $AB = 26$ and $BF = 20$, find AE .

4. find $m\angle CEB$

5. if $m\angle CBD = 58$, Find $m\angle ACB$

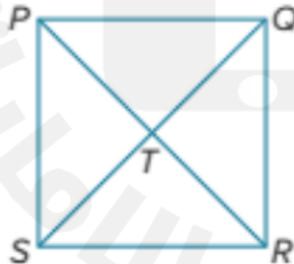
6. if $AE = 3x - 1$ and $AC = 16$, find x .



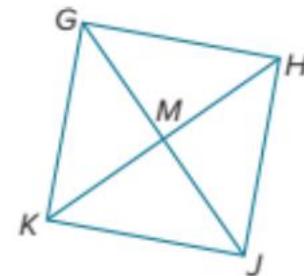
7. if $m\angle CDB = 6y$ and $m\angle ACB = 2x + 10$, Find the value of y .

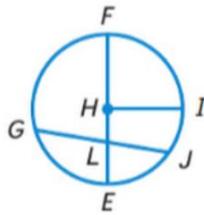
8. if $AD = 2x + 4$ and $CD = 4x - 4$, find the value of x .

b. PQRS is a square. If $PR = 42$, Find TR.



c. GHJK is a square. If $KM = 26.5$, Find KH.





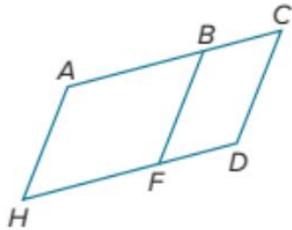
Eot1- term1, Grade 10 Advanced.

Math DEF.

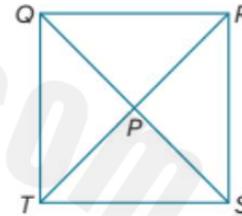
Issam Al Dabaibeh.

Write a two-column proof.

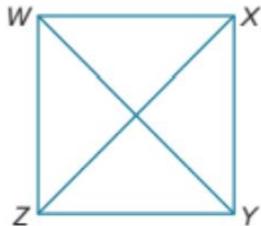
11. Given: $ACDH$ and $BCDF$ are parallelograms; $\overline{BF} \cong \overline{AB}$.
 Prove: $ABFH$ is a rhombus.



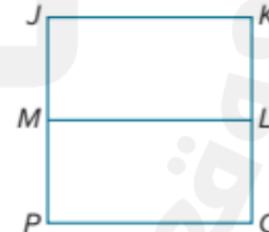
12. Given: $QRST$ is a parallelogram; $\overline{TR} \cong \overline{QS}$;
 $m\angle QPR = 90^\circ$.
 Prove: $QRST$ is a square.

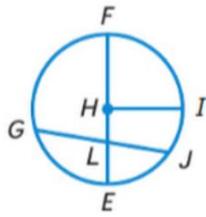


13. Given: $\overline{WZ} \parallel \overline{XY}$, $\overline{WX} \parallel \overline{ZY}$, $\overline{WX} \cong \overline{XY}$.
 Prove: $WXYZ$ is a rhombus.



14. Given: $JKQP$ is a square.
 \overline{ML} bisects \overline{JP} and \overline{KQ} .
 Prove: $JKLM$ is a parallelogram.





Math DEF.

Issam Al Dabaibeh.

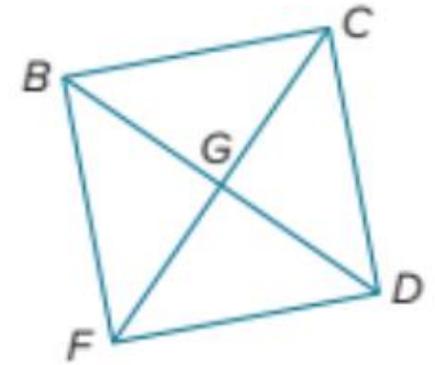
BCDF is a square with $FD = 55$, find each measure.

23. BC

24. CD

25. GD

26. BD

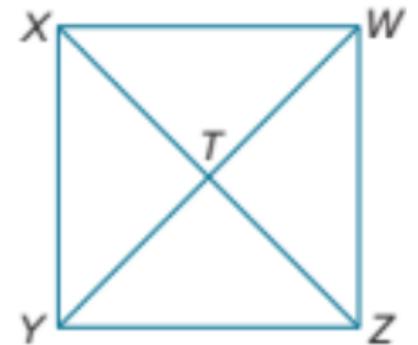


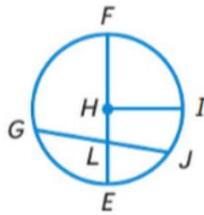
23. ZX

24. XY

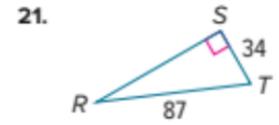
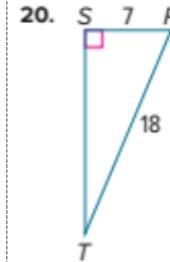
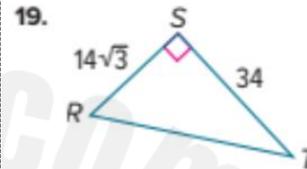
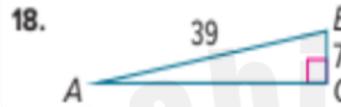
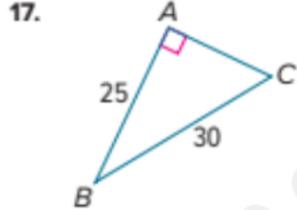
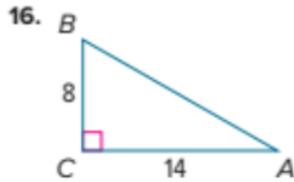
25. $m\angle WTZ$

26. $m\angle WYX$

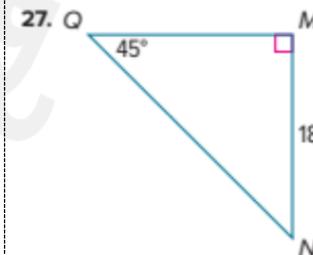
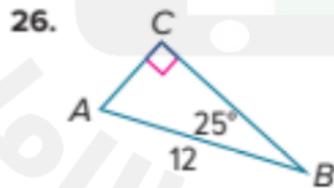
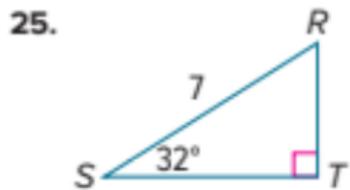
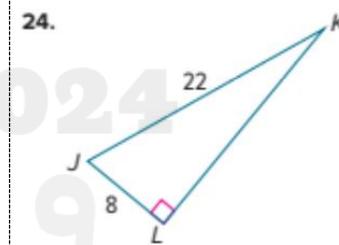
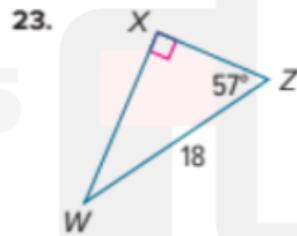
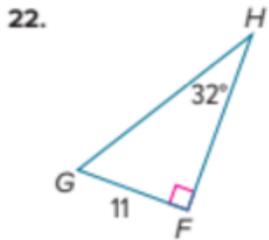


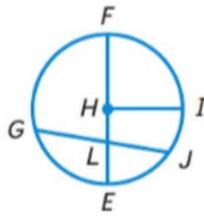


Use a calculator to find $m\angle B$ and $m\angle T$ to the nearest tenth.



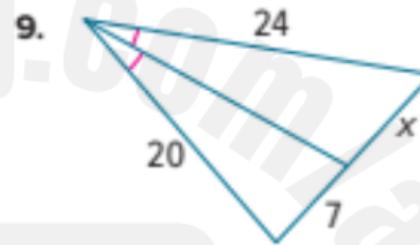
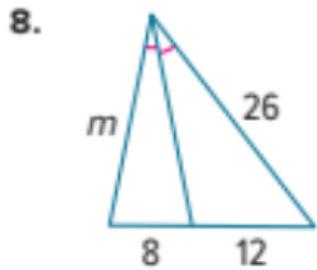
Solve each right triangle. Round side measures to the nearest tenth and angle measure to the nearest degree .



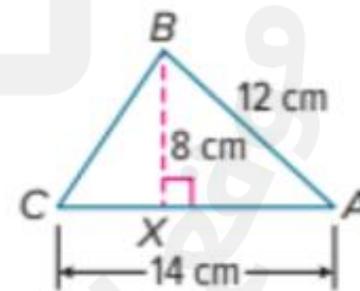


3. Recognize and use proportional relationships angle bisector, altitudes, and medians of similar triangles. **FRQ** page 153, 154.

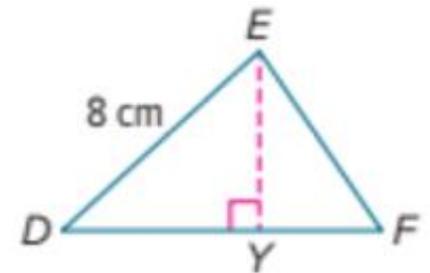
Find the value of each variable to the nearest tenth.

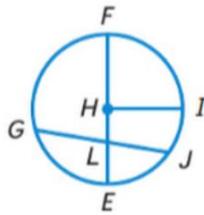


10. Find the length of \overline{XC} to the nearest tenth.



11. Find the length of \overline{EY} to the nearest tenth.

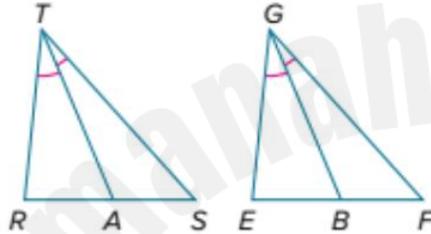




12. Write a paragraph proof of Theorem 8.12.

Given: $\triangle RTS \sim \triangle EGF$; \overline{TA} and \overline{GB} are angle bisectors.

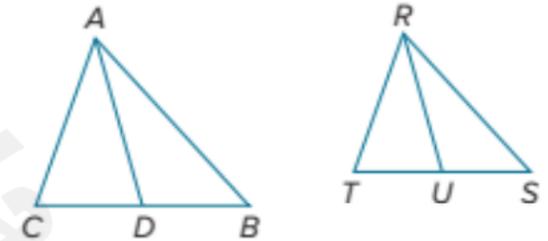
Prove: $\frac{TA}{GB} = \frac{RT}{EG}$



13. Write a Two-column proof of Theorem 8.13.

Given: $\triangle ABC \sim \triangle RST$; \overline{AD} is a median of $\triangle ABC$ and \overline{RU} is a median of $\triangle RST$.

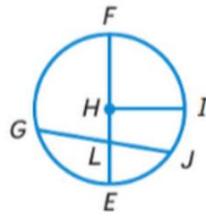
Prove: $\frac{AD}{RU} = \frac{AB}{RS}$



14. Write a two-column proof of the triangle angle Bisector theorem. 8.14

Given: \overline{CD} bisects $\angle ACB$. By construction, $\overline{AE} \parallel \overline{CD}$.

Prove: $\frac{AD}{DB} = \frac{AC}{BC}$



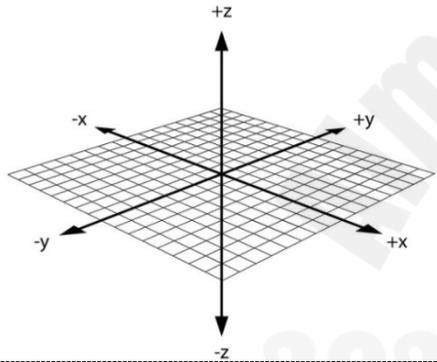
4. plot points and vectors in the three-dimensional coordinate system.

FRQ

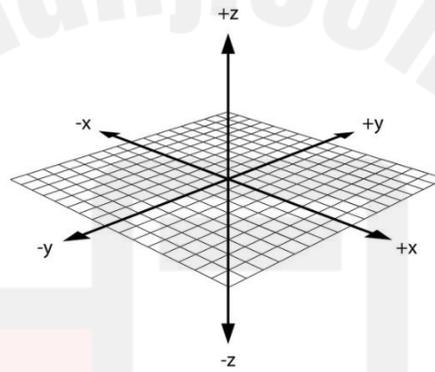
Page 177

Graph a rectangular solid that contains the given point and the origin as vertices. Label the coordinates of each vertex.

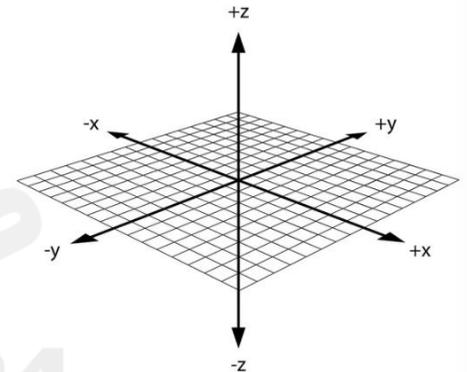
A(1, 2, 5)



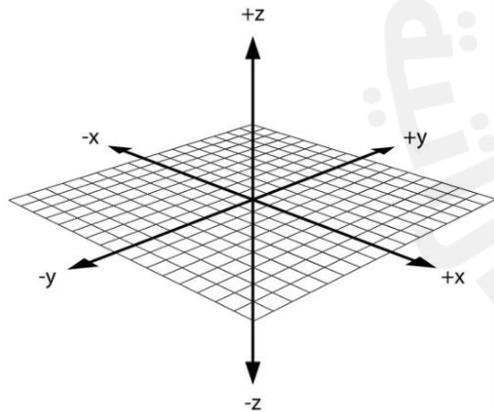
p(-1, 4, 2)



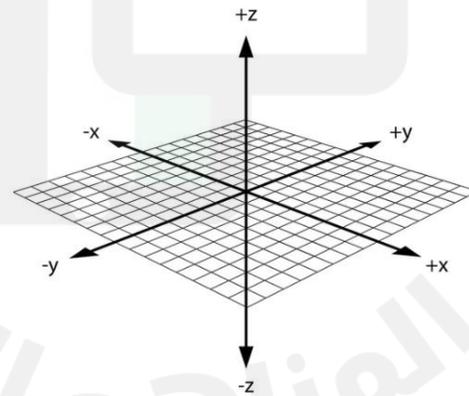
C(-2, 2, 2)



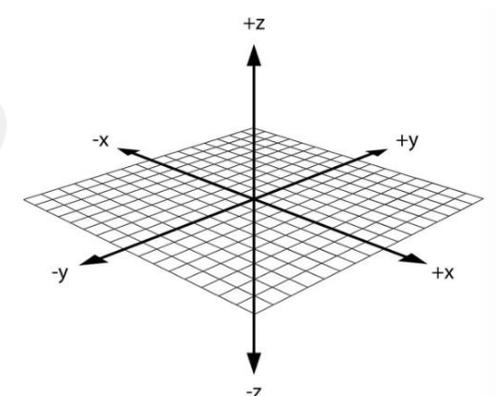
R(3, -4, 1)

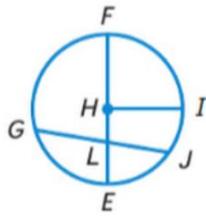


H(4, 5, -3)



G(4, 1, -3)





Eot1- term1, Grade 10 Advanced.

Math DEF.

Issam Al Dabaibeh.

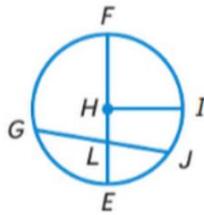
Determine the distance between each pair of points.

7. $F(0, 0, 0)$ and $G(2, 4, 3)$

8. $X(-2, 5, -1)$ and $Y(9, 0, 4)$

9. $A(4, -6, 0)$ and $B(1, 0, 1)$

10. $C(8, 7, -2)$ and $D(0, 0, 0)$

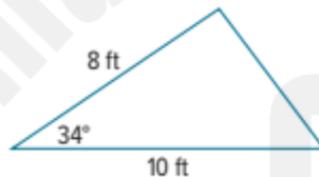


5. Find values of trigonometric ratios.

FRQ

Page 202.

1. Albert is helping to build the set for a play. One piece of scenery is a large triangle that will be constructed out of wood and be painted to represent a mountain. Albert would like to know the area of the piece of scenery so that he can buy the right amount of paint. What is the area of this triangle? Round your answer to the nearest tenth of a foot



2. Terrence and Rodrigo are trying to determine the relationship between angles of elevation and depression. Terrence says that if you are looking up at someone with an angle of elevation of 35, then they are looking down at you with an angle of depression of 55, which is the complement of 35. Rodrigo disagrees and says that the other person would be looking down at you with an angle of depression equal to your angle of elevation or 35. Who is correct ?

3. A classmate finds the angle of elevation of an object, but she is trying to find the angle of depression. Write a question to help her solve the problem.

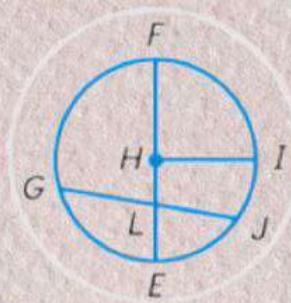
4. Classify the statement below as true or false. Explain your reasoning.
As a person moves closer to an object he or she is sighting, the angle of elevation increases.

5. find the value of x.



6. Describe a way that you can estimate the height of an object without using trigonometry. Explain your reasoning.

الأسئلة الموضوعية



MCQ

4 MARKS.

10

GEN.

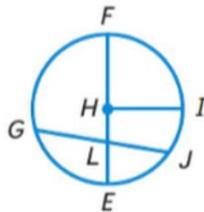
15 QUESTIONS.



مؤسسة الإمارات
للتعليم المدرسي
EMIRATES SCHOOLS
ESTABLISHMENT

MATH DEF.

عصام الدبايبه



6. Add and Subtract polynomials.

MCQ.

Find each sum or difference.

1. $(3c^3 - c + 11) - (c^2 + 2c + 8)$

2. $(z^2 + z) + (z^2 - 11)$

3. $(2x - 2y + 1) - (3y + 4x)$

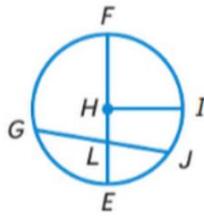
4. $(4a - 5b^2 + 3) + (6 - 2a + 3b^2)$

5. $(x^2y - 3x^2 + y) + (3y - 2x^2y)$

6. $(-8xy + 3x^2 - 5y) + (4x^2 - 2y + 6xy)$

7. $(5n - 2p^2 + 2np) - (4p^2 + 4n)$

8. $(4rxt - 8r^2x + x^2) - (6rx^2 + 5rxt - 2x^2)$



Classify each polynomial according to its degree and number of terms.

9. $4x - 3x^2 + 5$

10. $11z^3$

11. $9+y^4$

12. $3x^2 - 7x$

13. $-2x^5 - x^5 + 5x - 8$

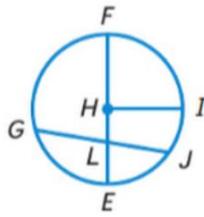
14. $10t - 4t^2 + 6t^3$

Find each sum or difference.

15. $(4x + 2y - 6z) + (5y - 2z + 7x) + (-9z - 2x - 3y)$

16. $(5a^2 - 4) + (a^2 - 2a + 12) + (4a^2 - 6a + 8)$

17. $(3c^2 - 7) + (4x + 7) - (c^2 + 5c - 8)$



7. Multiply a polynomial by a monomials.

MCQ

Page 642, 643.

Solve each equation.

1. $7(t^2 + 5t - 9) + t = t(7t - 2) + 13$

2. $w(4w + 6) + 2w = 2(2w^2 + 7w - 3)$

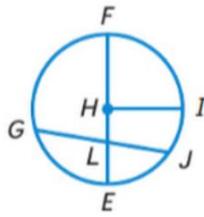
3. $5(4z + 6) - 2(z - 4) = 7z(z + 4) - z(7z - 2) - 48$

4. $9c(c - 11) + 10(5c - 3) = 3c(c + 5) + c(6c - 3) - 30$

5. $2f(5f - 2) - 10(f^2 - 3f + 6) = -8f(f + 4) + 4(2f^2 - 7f)$

7. $2f(5f - 2) - 10(f^2 - 3f + 6) = -8f(f + 4) + 4(2f^2 - 7f)$

8. $2k(-3k + 4) + 6(k^2 + 10) = k(4k + 8) - 2k(2k + 5)$



Eot1- term1, Grade 10 Advanced.

Math DEF.

Issam Al Dabaibeh.

Solve each equation.

a. $3(a+2)+5=2a+4$

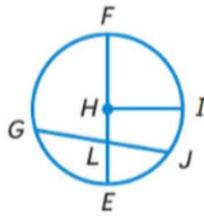
b. $2(4x+2)-8=4(x+3)$

c. $5(y+1)+2=4(y+2)-6$

d. $4(b+6)=2(b+5)+2$

e. $6(m-2)+14=3(m+2)-10$

f. $3(c+5)-2=2(c+6)+2$



8. Multiply binomials by using the FOIL method.

MCQ

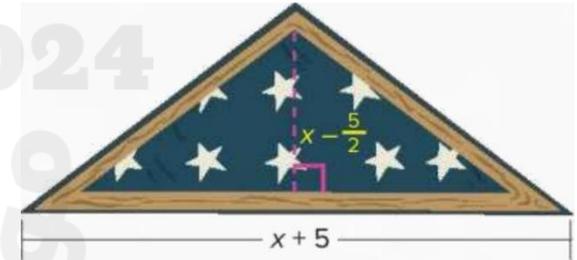
Page 649.

1. The dimensions of a playground are represented by a width of $9x + 1$ feet and a length of $5x - 2$. Write an expression that represents the area of the playground.

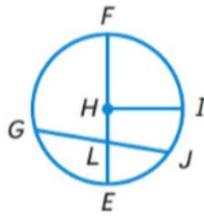
2. The loft Theater has a center seating section with $3c + 8$ rows and $4c - 1$ seats in each row. Write an expression for the total number of seats in the center section.

3. Suppose a rectangular quilt made up of squares has a length-to-width ratio of 5 to 4. The length of the quilt is $5x$ inches. The quilt can be made slightly larger by adding a border of 1-inch squares all the way around the perimeter of the quilt. Write a polynomial expression for the area of the larger quilt.

4. A United States flag is sometimes folded into a triangle shape and displayed in a triangular display case. If a display case has dimensions shown in inches. Write a polynomial expression that represents the area of wall space covered by the display case.



5. Think of a whole number. Subtract 2. Write down this number. Take the original number and add 2. Write down this number. Find the product of the numbers you wrote down. Subtract the square of the original number. The result is always -4. Use polynomials to show how this number trick works.



9. Find the product of sum and a difference.

MCQ

Page 658, 659.

a. $(n + 3)^2$

b. $(x + 4)(x + 4)$

c. $(y - 7)^2$

d. $(t - 3)(t - 3)$

e. $(b + 1)(b - 1)$

f. $(a - 5)(a + 5)$

g. $(p - 4)^2$

h. $(z + 3)(z - 3)$

i. $(l + 2)(l + 2)$

j. $(r - 1)(r - 1)$

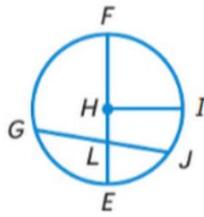
k. $(3g + 2)(3g - 2)$

l. $(2m - 3)(2m + 3)$

m. $(6 + u)^2$

n. $(r + t)^2$

o. $(3q + 1)(3q - 1)$



p. $(c - d)^2$

q. $(2k - 2)^2$

r. $(w + 3h)^2$

s. $(3p - 4)(3p + 4)$

t. $(t + 2u)^2$

u. $(x - 4y)^2$

v. $(3b - 7)(3b + 7)$

w. $(3y - 3g)(3y + 3g)$

x. $(n^2 + r^2)^2$

y. $(2k + m^2)^2$

z. $(3t^2 - n)^2$

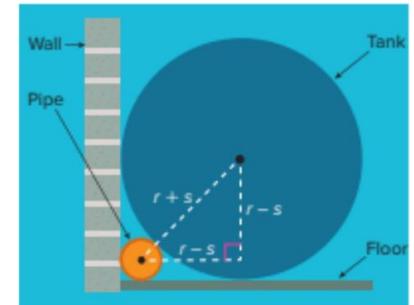
2. Find the product of $(10 - 4t)$ and $(10 + 4t)$.
What type of special product does this represent?

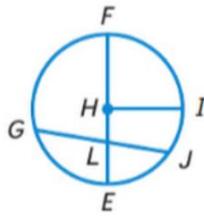
3. A cylindrical tank is placed along a wall. A cylindrical OPVC pipe will be hidden in the corner behind the tank.

See the side-view diagram shown. The radius of the tank is r inches, and the radius of the PVC pipe is s inches.

a. Use the Pythagorean theorem to write an equation for the relationship between the two radii. Simplify your equation so that there is a zero on one side of the equal sign.

b. Write a polynomial equation you could solve to find the radius s of the PVC pipe if the radius of the tank is 20 inches.





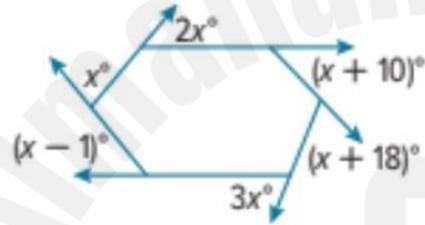
10. Find and use the sum of the measures of the exterior angles of a polygon.

MCQ

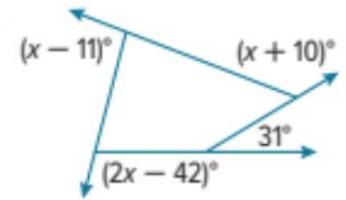
Page 64.

Find the value of x in each diagram.

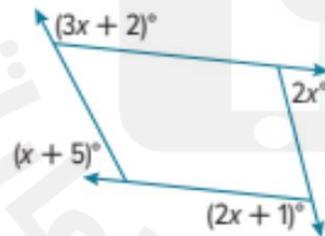
a.



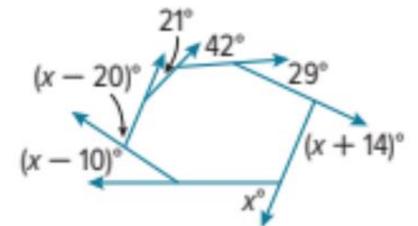
b.

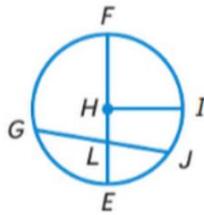


c.



d.

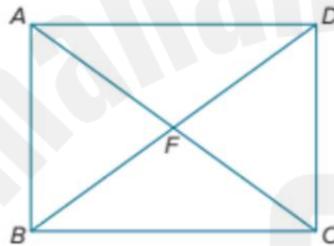




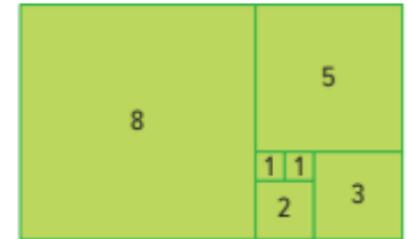
11. Determine whether parallelograms are rectangles.

Pages 87, 90

a. Quadrilateral $ABCD$ is a rectangle, if $m\angle ADB = (4x + 8)$. And $m\angle DBA = (6x + 12)$, find the value x .



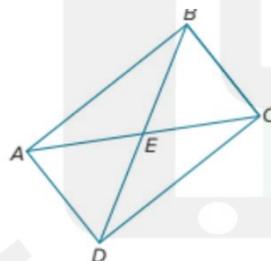
b. Veronica made the pattern shown out of 7 rectangles with four equal sides. The side length of each rectangle is written inside the rectangle.



a. how many rectangles can be formed using the lines in this figure?

b. If Veronica wanted to extend her pattern by adding another rectangle with 4 equal side to make a larger rectangle, what are the possible side lengths of rectangles that she can add?

c. in rectangle $ABCD$, $m\angle EAB = (4x + 6)$, and $m\angle EBC = (10 - 11y)$, and $m\angle EBC = 60$, find the values of x and y .

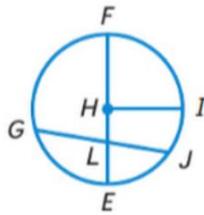


d. Parker says that any two congruent acute triangles can be arranged to make a rectangle. Takeisha says that only two congruent right triangles can be arranged to make a rectangle. Who is correct?

e. Why are all rectangle parallelograms, but all parallelograms are not rectangle?

f. Write the equations of four lines having intersections that form the vertices of a rectangle. Verify your answer using coordinate geometry.

g. Danny argues that to prove a parallelogram is a rectangle, it is sufficient to prove that it has one right angle. Do you agree? If so, explain why. If not, explain and draw a counterexample.

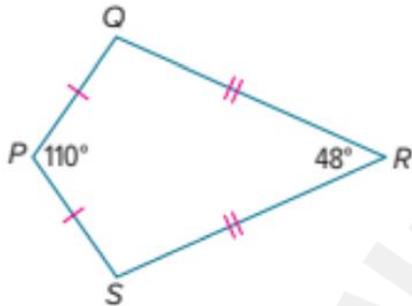


12. Recognize and apply the properties of kites.

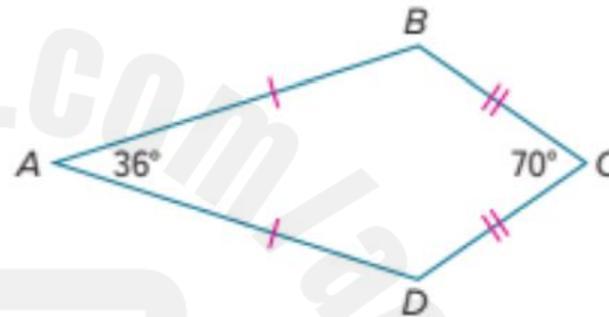
MCQ

Page 106.

13. $m\angle Q$

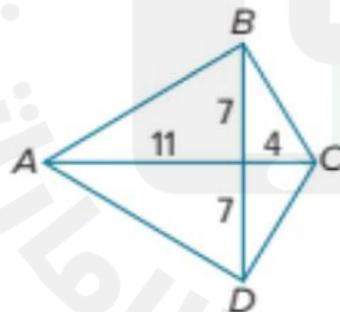


14. $m\angle D$



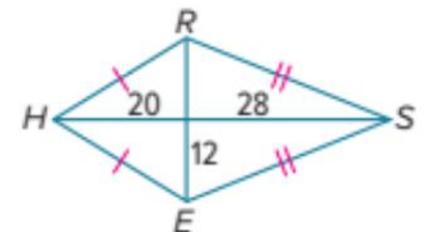
15. **REASONING** Quadrilateral $ABCD$ is a kite.

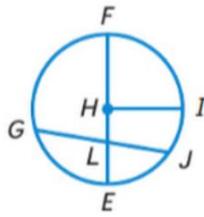
- Find BC . Write your answer in simplest radical form.
- Find the perimeter of kite $ABCD$. Round your answer to the nearest tenth, if necessary.



16. **REASONING** Quadrilateral $HRSE$ is a kite.

- Find RH . Write your answer in simplest radical form.
- Find the perimeter of kite $HRSE$. Round your answer to the nearest tenth, if necessary.





13. Draw dilations in the coordinate plane.

MCQ

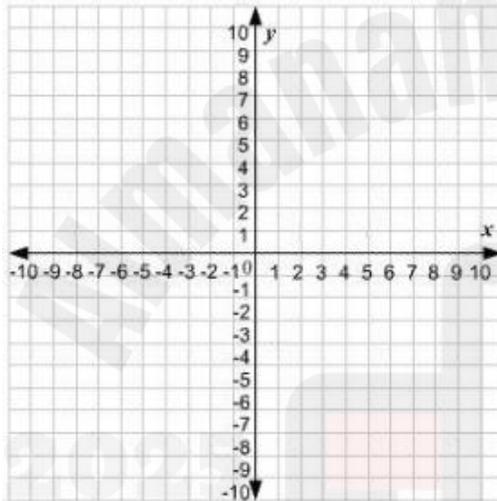
Page 119, 120

For each set of triangle vertices, find and graph the coordinates of the vertices of the image after a dilation of the triangle by the given scale factor.

a.

$$J(-8, 0), K(-4, 4), L(-2, 0)$$

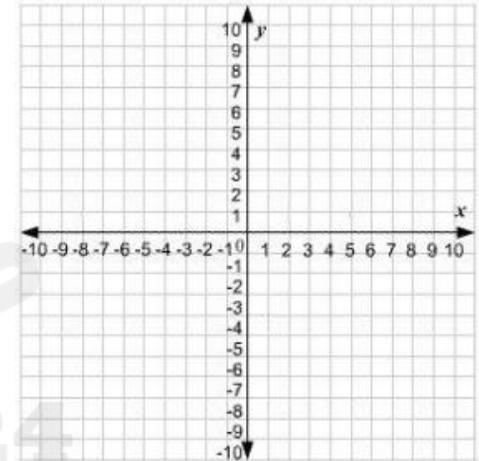
$$, k = 0.5$$



b.

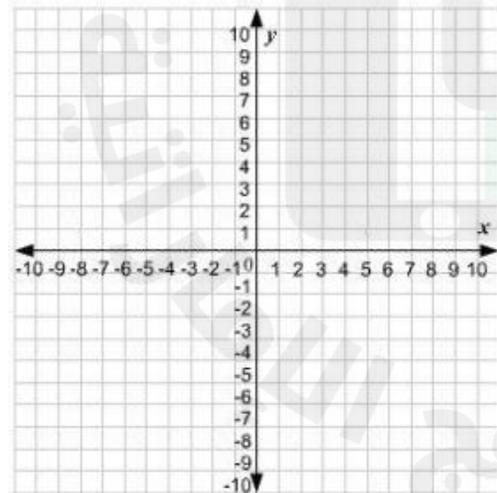
$$S(0, 0), T(-4, 0), V(-8, -8)$$

$$, k = 1.25$$



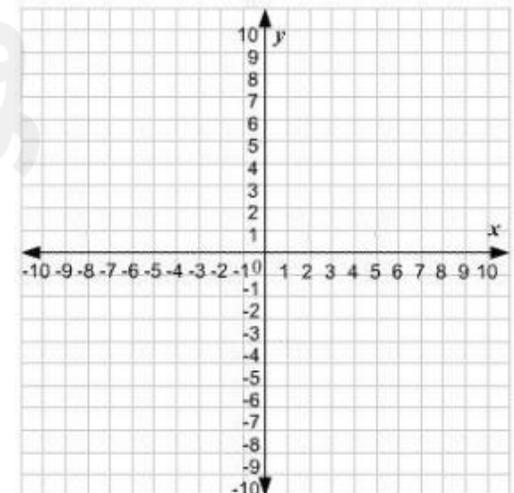
c. $A(9, 9), B(3, 3), C(6, 0)$

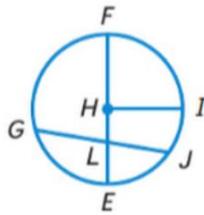
$$k = \frac{1}{3}$$



d. $D(4, 4), F(0, 0), G(8, 0)$

$$, k = 0.75$$



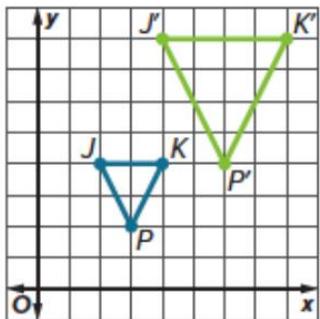


Math DEF.

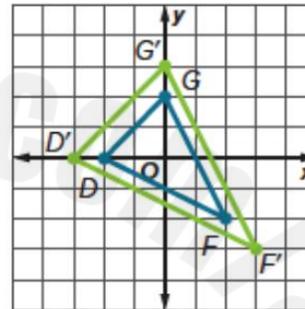
Issam Al Dabaibeh.

Find the scale factor of the dilation.

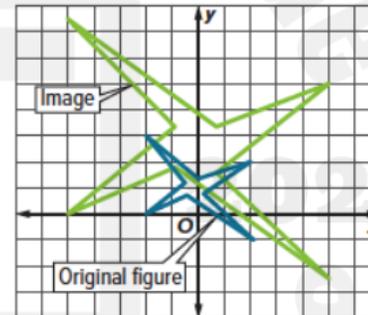
10. $\triangle J'K'P'$ is the image of $\triangle JKP$.



11. $\triangle D'F'G'$ is the image of $\triangle DFG$.

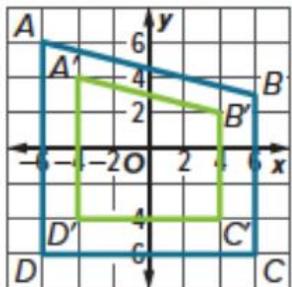


12. Tyrone drew a logo and a dilation of the same logo on the coordinate plane. What is the scale factor of the dilation?

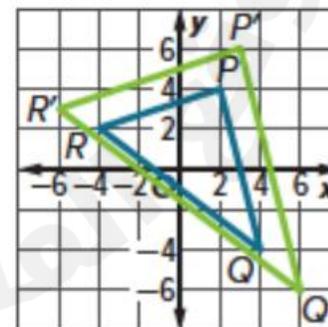


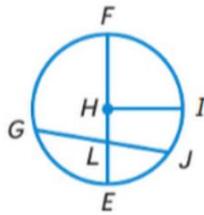
Find the scale factor of the dilation.

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



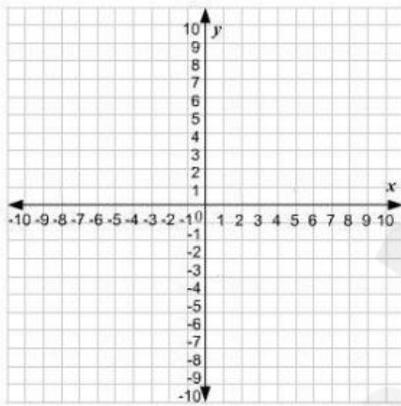
18. $\triangle P'Q'R'$ is the image of $\triangle PQR$.



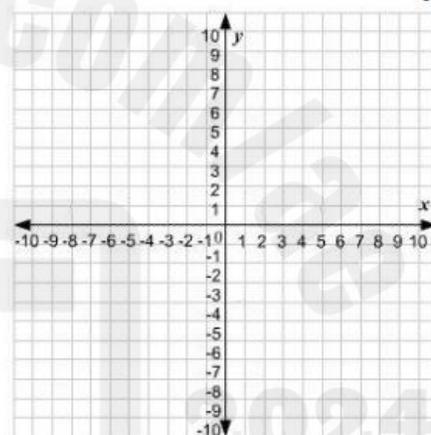


Graph the image of each polygon with the given vertices after a dilation centered at the origin with the given scale factor.

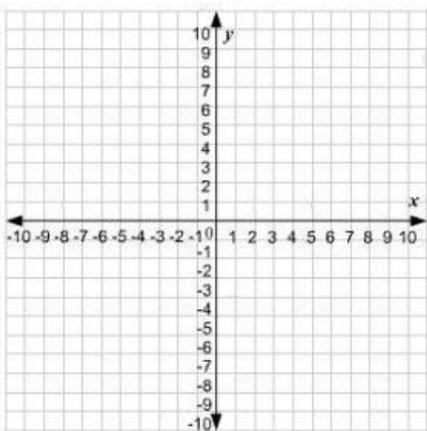
13. $F(-10, 4), G(-4, 4), H(-4, -8), k = 0.25$



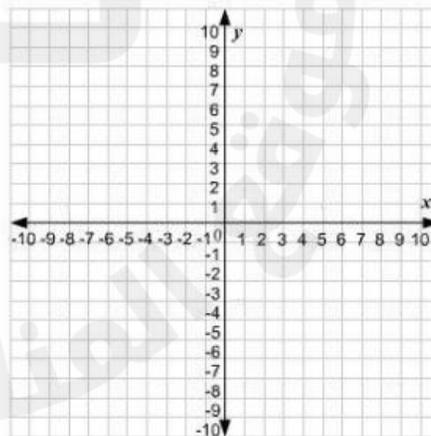
14. $X(2, -1), Y(-6, 4), Z(-2, -5), k = \frac{5}{4}$

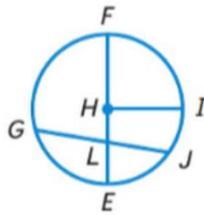


15. $M(4, 6), N(-6, 2), P(0, -8), k = \frac{3}{4}$



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



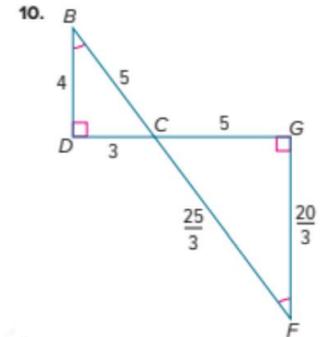
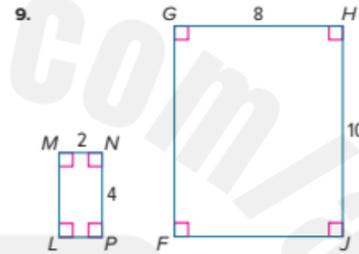
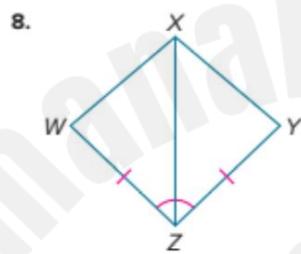
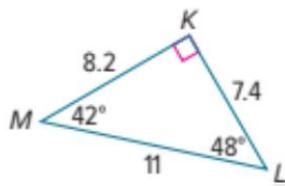
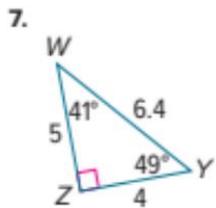


14. Solve problems using the properties of similar polygons.

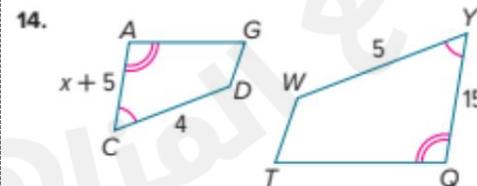
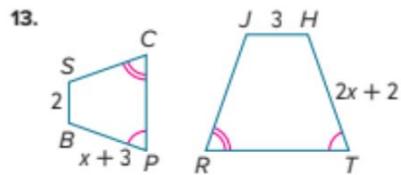
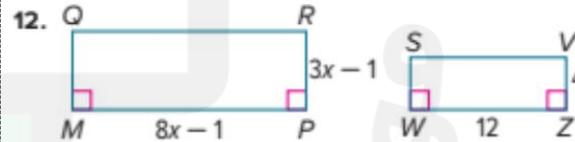
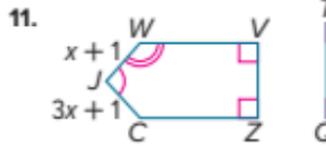
MCQ

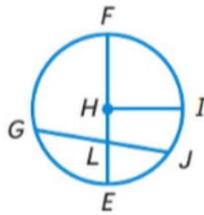
Page 128.

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



Each pair of polygons is similar. Find the value of x .



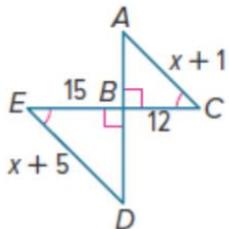


15. Use similar triangles to solve problems.

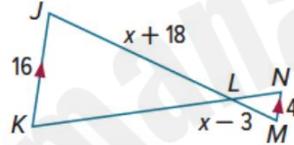
MCQ

Identify the similar triangles. Then find each measure.

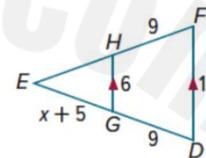
9. AC



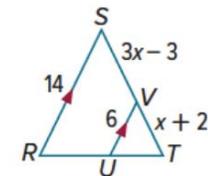
10. JL



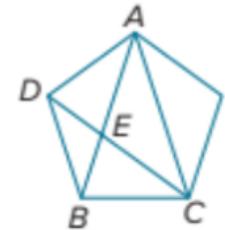
11. EH



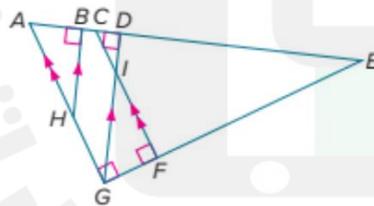
12. VT



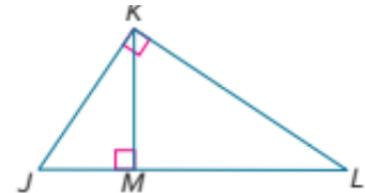
13. Olivia draws a regular pentagon and starts connecting its vertices to make a 5-pointed star. After drawing three of the lines in the star in the star, she becomes curious about two triangles that appear in the figure. $\triangle ABC$ and $\triangle CEB$. They look similar to her . prove that this is the case.

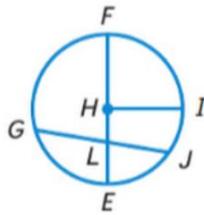


14. Write as many triangle similarity statements as possible for the figure shown. How do you know that these triangles are similar.



15. **PERSEVERE** In the figure, $\overline{KM} \perp \overline{JL}$ and $\overline{JK} \perp \overline{KL}$. Is $\triangle JKL \sim \triangle JMK$? Provide a proof to demonstrate their similarity or give an explanation of why they are not similar.



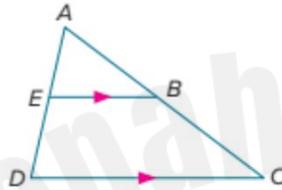


16. Use proportional parts with parallel lines.

MCQ

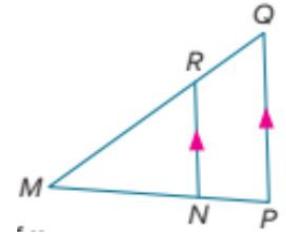
Use the figure at the right.

- If $AB = 6$, $BC = 4$, and $AE = 9$, find ED .
- If $AB = 12$, $AC = 16$, and $ED = 5$, find AE .

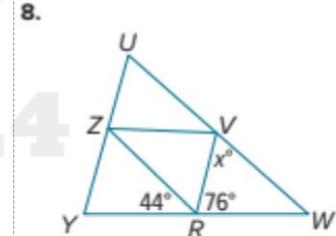
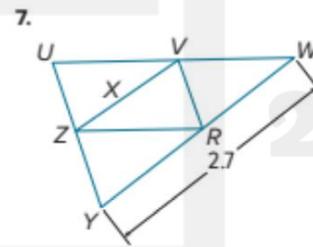
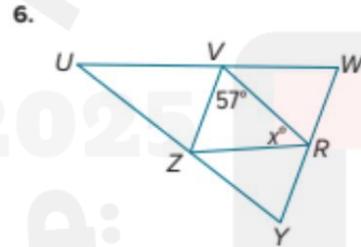
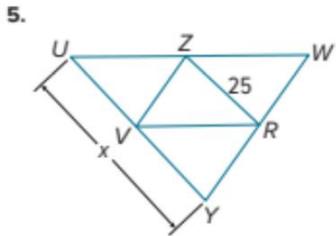


Determine whether $\overline{NR} \parallel \overline{PQ}$. Justify your answer.

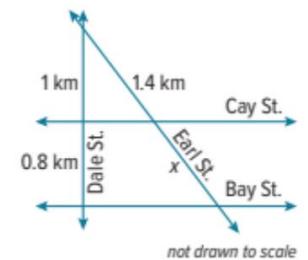
- $PM = 18$, $PN = 6$, $QM = 24$, and $RM = 16$
- $QM = 31$, $RM = 21$, and $PM = 4PN$



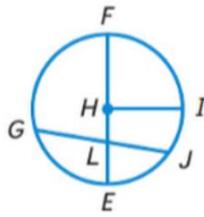
\overline{VR} , \overline{VZ} , and \overline{ZR} are midsegments of $\triangle UWY$. Find the value of x .



9. In Mika's town. Cag street and Bay Street are parallel. Find the value of x . the distance from Cay street to Bay street along Earl street.



not drawn to scale

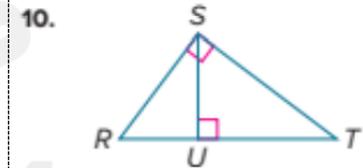
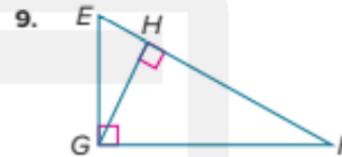
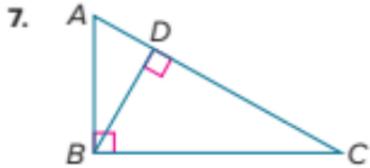


17. solve problems involving relationships between parts of a right triangle and the altitude to its hypotenuse. MCQ page 165.

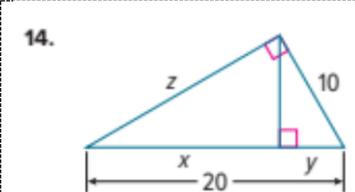
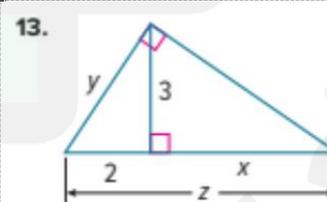
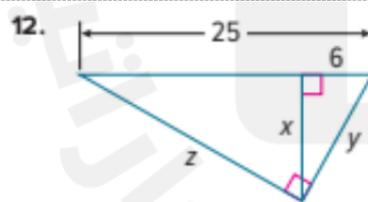
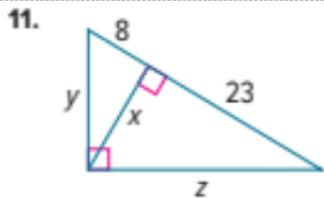
Find the geometric mean between each pair of numbers.

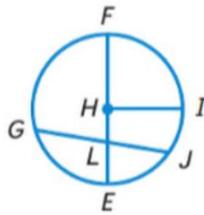
a. 4 and 6	b. $\frac{1}{2}$ and 2	c. 4 and 25
d. 12 and 20	e. 17 and 3	d. 3 and 24

Write a similarity statement identifying the three similar right triangles in each figure.



Find the value of x , y , z .





18. Use the converse of the Pythagorean theorem.

MCQ

Page 172.

Determine whether the points X, Y, and Z can be the vertices of a triangle. If so, classify the triangle as acute, right or obtuse. Justify your answer.

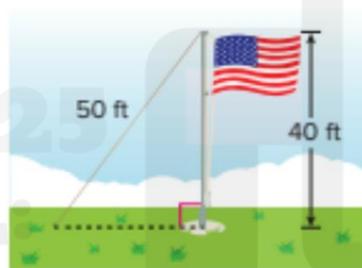
a. $X(-3, -2), Y(-1, 0), Z(0, -1)$

b. $X(-7, -3), Y(-2, -5), Z(-4, -1)$

c. $X(1, 2), Y(4, 6), Z(6, 6)$

d. $X(3, 1), Y(3, 7), Z(11, 1)$

2. To help support a flag pole, a 50-foot-long tether is tied to the pole at a point 40 feet about the ground. The tether is pulled taut and tied to an anchor in the ground. How far away from the base of the pole is the anchor?

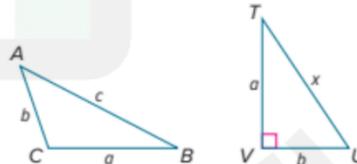
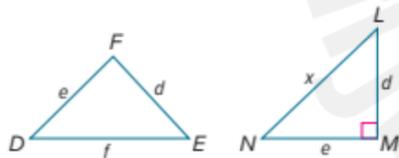


3. Determine whether each set of measures can be the measures of the sides of a triangle. If so, classify the triangle as acute, obtuse, or right. Justify your answer.

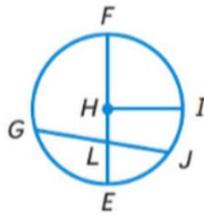
a. $\sqrt{5}, \sqrt{12}, \sqrt{13}$

b. $2, \sqrt{8}, \sqrt{12}$

c. 9, 40, 41



6. Construction workers are building a marble sidewalk around a park that is shaped like a right triangle. Each marble slab adds 2 feet to the length of the sidewalk. The workers find that exactly 1071 and 1840 slabs are required to make the sidewalks along the short sides of the park but counting corner pieces, how many slabs are required to make the sidewalk that runs along the long side of the park



Use the properties of 45° , 45° , 90° triangles.

MCQ

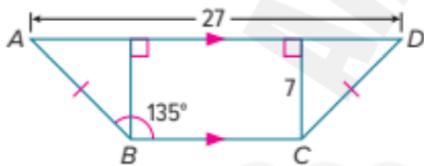
page 186.

1. $\triangle XYZ$ is a 45° , 45° , 90° triangle with right angle Z. Find the coordinates of X in Quadrant I for $Y(-1, 2)$ and $Z(6, 2)$

2. $\triangle EFG$ is a 30° , 60° , 90° triangle with $m\angle 90^\circ$. Find the coordinates of E in Quadrant III for $F(-3, -4)$ and $G(-3, 2)$. \overline{FG} is the longer leg.

3. The ratio of the measure of the angles of a triangle is 1:2:3. The length of the shortest side is 8. What is the perimeter of the triangle ?

4. Find the perimeter of quadrilateral ABCD. Round your answer to the nearest tenth.



5. Who is correct in finding x.

Carmen

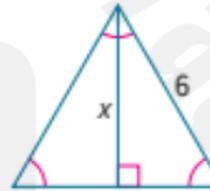
$$x = \frac{6\sqrt{3}}{2}$$

$$x = 3\sqrt{3}$$

Audrey

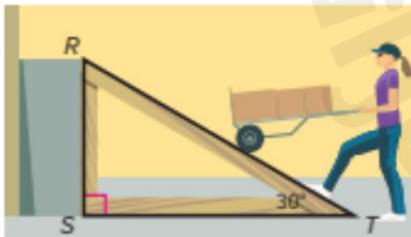
$$x = \frac{6\sqrt{2}}{2}$$

$$x = 3\sqrt{2}$$

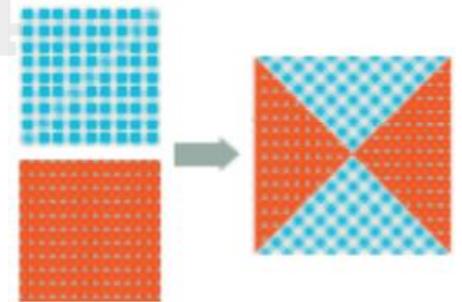


6. Why are some triangles considered special?

7. Melody is in charge of building a ramp for a loading dock. According to the plan, the ramp makes a 30° angle with the ground. The plan also states that \overline{ST} is 4 feet longer than \overline{RS} . Use a calculator to find the lengths of the three sides of the ramp to the nearest thousandth.

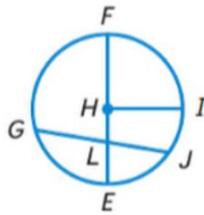


8. Liling is making a quilt. She starts with two small squares of material and cuts them along the diagonal. Then she arranges the four resulting triangles to make a large square quilt block. She wants the large quilt block to have an area of 36 square inches.



- What side length should Liling use for the two small squares of material? Explain ?
- Explain any assumption that you make to answer part a.

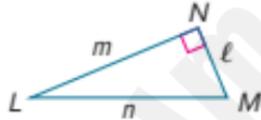
9. Draw a rectangle that has diagonal twice as long as its width. Then write an equation to find the length of the rectangle.



20. Use trigonometric ratios to find side lengths and angle measures of right triangles **MCQ** Page 191.

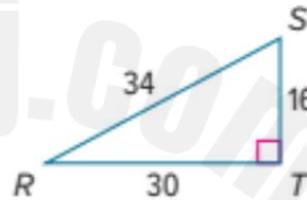
1. Find $\sin L$, $\cos L$, $\tan L$, $\sin M$, $\cos M$, $\tan M$
Express each ratio as a fraction and as a decimal to the nearest hundredth.

a. $l = 15, m = 36,$
 $n = 39$

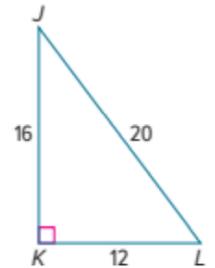


b. $l = 12, m = 2\sqrt{3},$
 $n = 24$

2. Find $\sin R$, $\cos R$, $\tan R$, $\sin S$, $\cos S$, $\tan S$
Express each ratio as a fraction and as a decimal to the nearest hundredth.



3. Find $\sin J$, $\cos J$, $\tan J$, $\sin L$, $\cos L$, $\tan L$
Express each ratio as a fraction and as a decimal to the nearest hundredth.



4. Use a special right triangle to express each trigonometric ratio as a fraction and a decimal to the nearest hundredth if necessary.

a. $\sin 30$

b. $\tan 45$

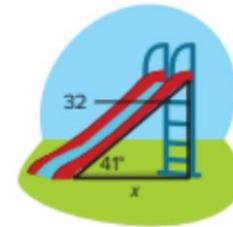
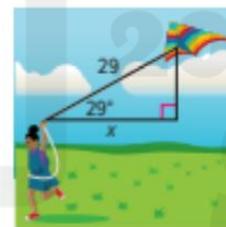
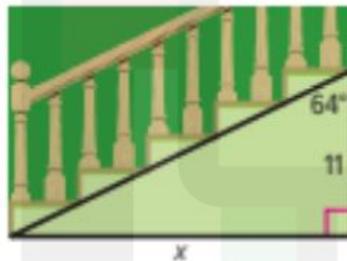
c. $\cos 60$

d. $\sin 60$

e. $\tan 30$

f. $\cos 45$

5. find the value of x.

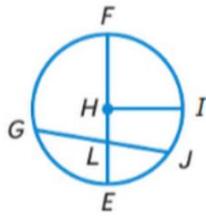


6. What is the height of the formation to the nearest meter.



7. how high above the first floor is the second floor ?





Eot1- term1, Grade 10 Advanced.

Math DEF.

Issam Al Dabaibeh.

