

هيكل مراجعة أسئلة مع الحلول (محلل)



تم تحميل هذا الملف من موقع المناهج الإماراتية

موقع المناهج ⇨ المناهج الإماراتية ⇨ الصف الحادي عشر العام ⇨ رياضيات ⇨ الفصل الأول ⇨ ملفات متنوعة ⇨ الملف

تاريخ إضافة الملف على موقع المناهج: 2026-10-25 12:30:36

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منهج انجليزي ا ملخصات وتقارير ا مذكرات وبنوك ا الامتحان النهائي ا للمدرس

المزيد من مادة
رياضيات:

إعداد: Aghead

التواصل الاجتماعي حسب الصف الحادي عشر العام



صفحة المناهج
الإماراتية على
فيسبوك

الرياضيات

اللغة الانجليزية

اللغة العربية

التربية الاسلامية

المواد على تلغرام

المزيد من الملفات بحسب الصف الحادي عشر العام والمادة رياضيات في الفصل الأول

تجميع هيكل ريفيل 2027 بدون حل

1

تجميع هيكل منهج عربي مع حل الهيكل 2027

2

تجميع هيكل منهج عربي بدون حل 2027

3

اختبار الوحدة الأولى (التناسب والتشابه)

4

اختبار الوحدة الثانية: المثلثات قائمة الزاوية وحساب المثلثات

5

تحميل تطبيق المناهج للهواتف الذكية

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وزارة التربية والتعليم
MINISTRY OF EDUCATION

هيكل رياضيات الصف الحادي عشر عام ريفيل الفصل الأول للعام 2026-2027

احجز مكانك واستعد للامتحان بثقة كاملة

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شرح الدروس



انضم للقناة



Mr. Aghead

للتواصل اضغط الرقم:

0566991363

Mr. Ahead

يمكنكم الحصول على



نموذج محاكي
للامتحان



شرح فيديو
للهيكل كامل



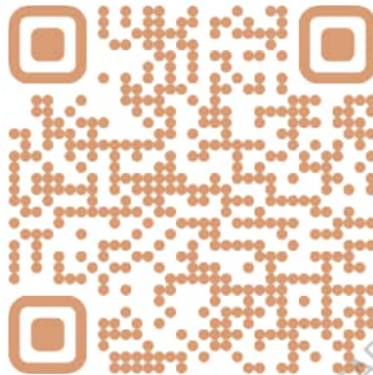
هيكل محلول



149
درهم فقط



لا تتردد في
التواصل معنا قم
بمسح ال QR



احصل على الشرح الكامل للصف من خلال:
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Q1: Use scale factors to graph dilations.

Page: 117, example 1.

الأسئلة الموضوعية - MCQ

Example 3 Dilate a Figure

$\triangle TRS$ has vertices $T(-4, -5)$, $R(0, 6)$, and $S(4, 3)$. Find the coordinates of the vertices of $\triangle T'R'S'$ after a dilation of $\triangle TRS$ by a scale factor of $k = \frac{1}{2}$.

- A) $T'(-2, -2.5)$, $R'(0, 3)$, $S'(2, 1.5)$
 B) $T'(-8, -10)$, $R'(0, 12)$, $S'(8, 6)$
 C) $T'(-2, -5)$, $R'(0, 6)$, $S'(2, 3)$
 D) $T'(2, 2.5)$, $R'(0, -3)$, $S'(-2, -1.5)$

D	C	B	A
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Check

$\triangle XYZ$ has vertices $X(3, -4)$, $Y(6, 5)$, and $Z(8, -2)$. Find the coordinates of the vertices of $\triangle X'Y'Z'$ after a dilation of $\triangle XYZ$ by a scale factor of 4.

- A) $X'(0.75, -1)$, $Y'(1.5, 1.25)$, $Z'(2, -0.5)$
 B) $X'(7, 0)$, $Y'(10, 9)$, $Z'(12, 2)$
 C) $X'(12, -16)$, $Y'(24, 20)$, $Z'(32, -8)$
 D) $X'(12, -4)$, $Y'(24, 5)$, $Z'(32, -2)$

D	C	B	A
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Q2: Use proportions to identify similar polygons.

Page: 126, example 4.

الأسئلة الموضوعية - MCQ

Example 4 Use Similar Polygons to Find Perimeter

Part A Describe Geoffrey's path.

Geoffrey plans to visit the concert hall, the Ferris wheel, and the sports center at the state fair. On a map, the distance between the concert hall and the Ferris wheel is 9 cm, the distance between the Ferris wheel and the sports center is 8 cm, and the distance between the sports center and the concert hall is 4 cm. If Geoffrey visits all three attractions and returns to the concert hall, what polygon models his path?

- A) Quadrilateral
- B) Triangle
- C) Pentagon
- D) Rectangle

D	C	B	A
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Part B. Find the total distance.

On the map of the fairgrounds, the side lengths of the triangle connecting the concert hall (C), the sports center (S), and the Ferris wheel (F) are $CS = 4$ cm, $SF = 8$ cm, and $FC = 9$ cm. If the actual distance between the concert hall and the sports center ($C'S'$) is 20 meters, what is the total actual distance Geoffrey will travel to visit all three attractions and return to his starting point?

- A) 84 meters
- B) 95 meters
- C) 100 meters
- D) 105 meters

D	C	B	A
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Q3: Identify similar triangles using the AA postulate.

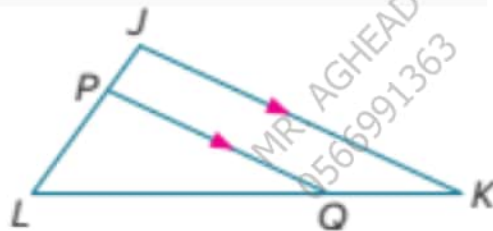
Page: 131, example 1.

الأسئلة الموضوعية - MCQ

Example 1 Use the AA Similarity Postulate

In the figure provided, line segment PQ is parallel to line segment JK ($PQ \parallel JK$). Determine whether $\triangle KLJ$ and $\triangle QLP$ are similar, and state the reasoning.

- A) Yes, $\triangle KLJ \sim \triangle QLP$ by AA Similarity (since $\angle L \cong \angle L$ and $\angle LPQ \cong \angle LJK$).
B) Yes, $\triangle KLJ \sim \triangle QLP$ by SSS Similarity.
C) No, because the sides are not proportional.
D) No, because the angles are not congruent.



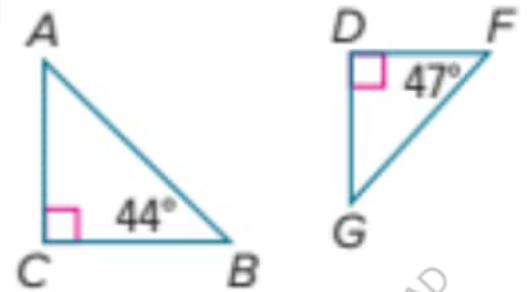
D	C	B	A
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Check

Determine whether $\triangle ABC$ (with $m\angle C = 90^\circ$ and $m\angle B = 44^\circ$) and $\triangle DFG$ (with $m\angle D = 90^\circ$ and $m\angle F = 47^\circ$) are similar.

- A) Yes, they are similar by AA Similarity.
B) Yes, they are similar by SAS Similarity.
C) No, the triangles are not similar because their corresponding acute angles are not equal ($44^\circ \neq 47^\circ$).
D) No, because neither triangle is a right-angled triangle.

D	C	B	A
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Q4: Identify similar triangles using the AA

Similarity Postulate and the SSS and SAS Similarity Theorems.

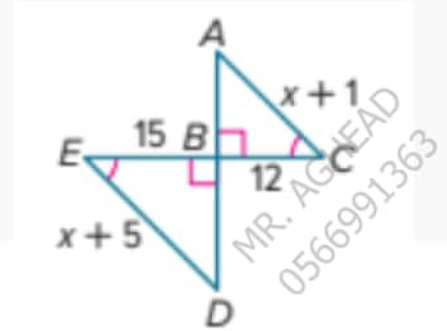
Page: 134, (9-11)

الأسئلة الموضوعية - MCQ

Identify the similar triangles. Then find each measure.

In the given figure, $\triangle ABC$ and $\triangle EBD$ are right-angled at B , with $\angle C \cong \angle E$. Given $BC = 12$, $EB = 15$, $ED = x + 5$, and $AC = x + 1$, what is the length of AC ?

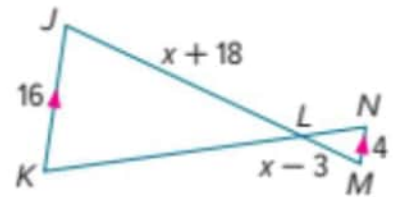
- A) $AC = 12$
- B) $AC = 16$
- C) $AC = 20$
- D) $AC = 15$



D	C	B	A
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In the given figure, line segment JK is parallel to NM ($JK \parallel NM$). If $JK = 16$, $NM = 4$, $ML = x - 3$, and $JL = x + 18$, find the length of JL :

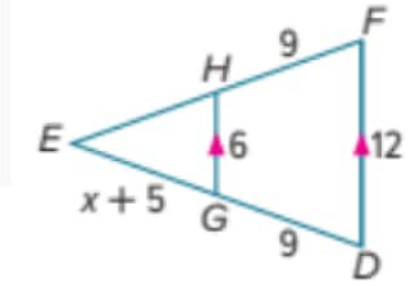
- A) $JL = 10$
- B) $JL = 21$
- C) $JL = 28$
- D) $JL = 32$



D	C	B	A
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In the given figure, line segment HG is parallel to FD ($HG \parallel FD$). If $HG = 6$, $FD = 12$, $HF = 9$, and $EG = x + 5$, find the length of EH :

- A) $EH = 6$
- B) $EH = 8$
- C) $EH = 12$
- D) $EH = 9$



D	C	B	A
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Q5: Identify similar triangles using the AA Similarity Postulate and the SSS and SAS Similarity Theorems.

Page: 135, example 1.

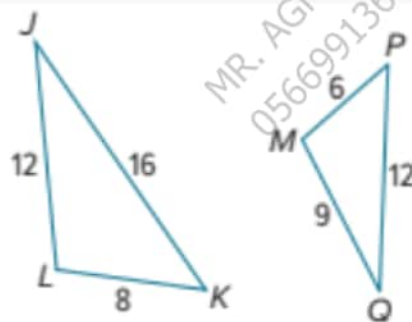
الأسئلة الموضوعية - MCQ

Example 1 Use the SSS and SAS Similarity Theorems

Determine whether the triangles are similar. Explain your reasoning.

In the given figure, $\triangle JLK$ has side lengths $JL = 12$, $LK = 8$, and $JK = 16$, while $\triangle QMP$ has side lengths $QM = 9$, $MP = 6$, and $QP = 12$. Determine whether the triangles are similar and state the correct reasoning.

- A) Yes, $\triangle JLK \sim \triangle QMP$ by the SSS Similarity Theorem because the ratio of all corresponding sides is $\frac{4}{3}$.
- B) Yes, $\triangle JLK \sim \triangle QMP$ by the SAS Similarity Theorem.
- C) No, because the corresponding side ratios are not equal.
- D) No, because the angles are not congruent.



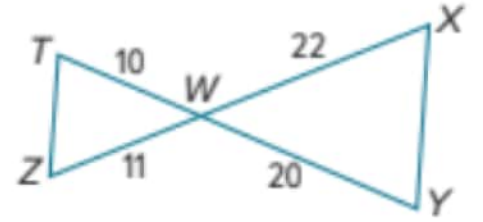
D	C	B	A
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Check

In the given figure, line segments TX and ZY intersect at point W , forming $\triangle TWZ$ and $\triangle XWY$. Given $TW = 10$, $ZW = 11$, $XW = 22$, and $YW = 20$, determine whether $\triangle TWZ$ and $\triangle XWY$ are similar.

- A) Yes, $\triangle TWZ \sim \triangle XWY$ by the SSS Similarity Theorem.
B) Yes, $\triangle TWZ \sim \triangle XWY$ by the SAS Similarity Theorem because $\frac{XW}{ZW} = \frac{YW}{TW} = 2$ and the vertical angles at W are congruent ($\angle TWZ \cong \angle XWY$).
C) No, because the ratios of the corresponding sides are not equal.
D) No, because vertical angles are not congruent.

D	C	B	A
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Q6: Use proportional parts within triangles.

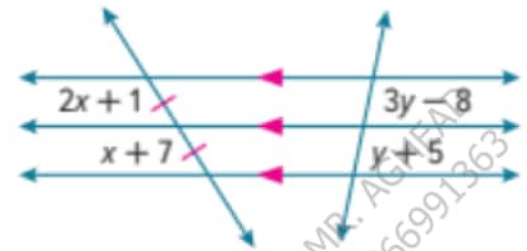
Page: 146, (11-12).

الأسئلة الموضوعية - MCQ

Find the values of x and y .

In the given figure, three horizontal parallel lines are cut by two transversals. The segments on the left transversal are marked as congruent ($2x + 1 = x + 7$). Find the values of x and y .

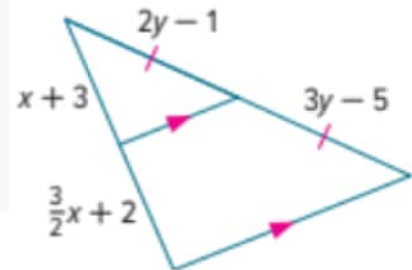
- A) $x = 5, y = 4$
- B) $x = 6, y = 5.5$
- C) $x = 6, y = 6.5$
- D) $x = 7, y = 6$



D	C	B	A
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In the given figure, a line segment inside the triangle is parallel to one of its sides. The segments along one side are marked as congruent ($2y - 1 = 3y - 5$). Find the values of x and y .

- A) $x = 4, y = 3$
- B) $x = 3, y = 4$
- C) $x = 1, y = 4$
- D) $x = 2, y = 4$



D	C	B	A
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Q7: Recognize and use proportional relationships of corresponding angle bisectors, altitudes, and medians of similar triangles. Page 150, example 1.

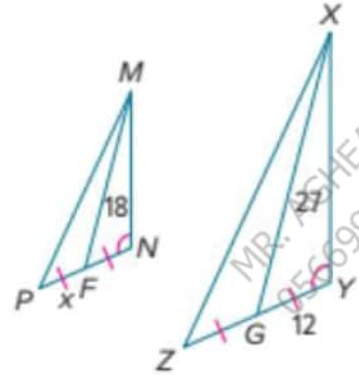
الأسئلة الموضوعية - MCQ

Example 1 Use Special Segments in Similar Triangles

In the figure, $\triangle MNP \sim \triangle XYZ$. Find the value of x .

In the given figure, $\triangle MNP \sim \triangle XYZ$. $\overline{MF}$ and $\overline{XG}$ are corresponding medians, with $MF = 18$, $XG = 27$, $PF = x$, and $GY = 12$. Find the value of x .

- A) $x = 8$
- B) $x = 9$
- C) $x = 12$
- D) $x = 16$



D	C	B	A
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Q8: Find the geometric mean between two numbers

Page: 162, example 1.

الأسئلة الموضوعية - MCQ

Example 1 Find a Geometric Mean

Find the geometric mean between 5 and 45.

Find the geometric mean between 5 and 45.

- A) 22.5
- B) 15
- C) 25
- D) 225

D	C	B	A
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Check

Find the geometric mean between 12 and 15. Write your answer in simplest radical form.

- A) $3\sqrt{10}$
- B) 180
- C) $6\sqrt{5}$
- D) $9\sqrt{5}$

D	C	B	A
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Q9: Use the Pythagorean Theorem.

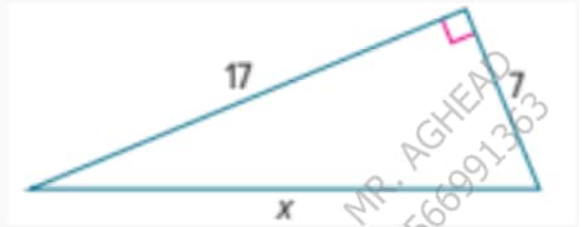
Page: 167, example 1.

الأسئلة الموضوعية - MCQ

Example 1 Find Missing Measures by Using the Pythagorean Theorem

In the right-angled triangle shown, the lengths of the two legs are 17 and 7, and the length of the hypotenuse is x . Find the value of x in simplest radical form.

- A) $x = 24$
B) $x = 13$
C) $x = \sqrt{240}$
D) $x = 13\sqrt{2}$



D	C	B	A
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Q10: Use the Pythagorean Theorem.

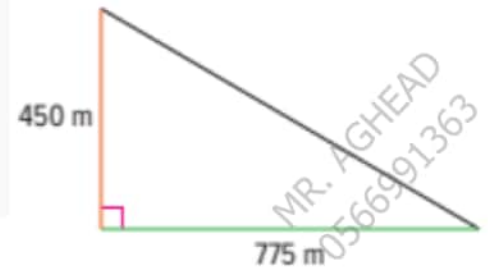
Page: 168, example 3.

الأسئلة الموضوعية - MCQ

Example 3 Use the Pythagorean Theorem

A summer camp is building a new zip lining course. The designer of the course wants the last zip line to start at a platform 450 meters above the ground and end 775 meters away from the base of the platform. How long must the zip line be to meet the designer's specifications?

- A) $25\sqrt{1285}$ meters (or about 896.17 meters)
- B) 896.17 meters
- C) 1225 meters
- D) $600\sqrt{5}$ meters



D	C	B	A
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Check

Lincoln High School is installing a wheelchair ramp. The ramp needs to have a base that is 12 feet long and reaches a height of 1 foot. If the side of the ramp forms a right triangle, what is the exact length of the inclined surface of the ramp?

- A) 13 feet
- B) $\sqrt{145}$ feet
- C) $\sqrt{143}$ feet
- D) 12.04 feet

D	C	B	A
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Q11: Find the distance between two points on the coordinate plane.

Page: 176, example 2.

الأسئلة الموضوعية - MCQ

Example 2 Distance Formula in Space

On an anatomical coordinate system, the top of a man's spine is located at $(5, 0, 65)$, and the bottom of his spine is located at $(3, 0, -6)$. If each unit on the coordinate system represents a centimeter, what is the length of the man's spine?

- A) 71.0 cm
- B) 65.2 cm
- C) $\sqrt{5045}$ cm (or about 71.0 cm)
- D) 5045.0 cm

D	C	B	A
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Check

An airplane in a three-dimensional coordinate system is located at $(17, -14, 23)$, and an air traffic control tower is located at $(0, 0, 0)$. If each unit on the coordinate system represents a kilometer, what is the distance between the airplane and the tower? Round your answer to the nearest tenth, if necessary.

- A) 26.0 km
- B) 28.6 km
- C) 30.0 km
- D) 31.8 km

D	C	B	A
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Q12: Use the properties of 30° , 60° , 90° triangles.

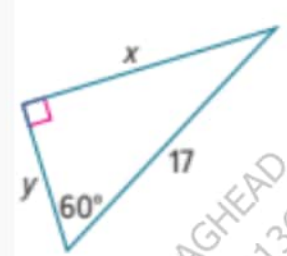
Page: 184, (22-24)

الأسئلة الموضوعية - MCQ

Find the values of x and y .

In the right triangle shown, the hypotenuse is 17, the angle opposite side x is 60° , and side y is adjacent to the 60° angle. Find the values of x and y .

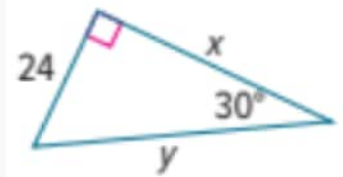
- A) $x = \frac{17\sqrt{3}}{2}$, $y = 8.5$
B) $x = 8.5$, $y = \frac{17\sqrt{3}}{2}$
C) $x = 17\sqrt{3}$, $y = 8.5$
D) $x = \frac{17}{2}$, $y = 17\sqrt{3}$



D C B A

In the right triangle shown, the leg opposite the 30° angle is 24, the leg adjacent to the 30° angle is x , and the hypotenuse is y . Find the values of x and y .

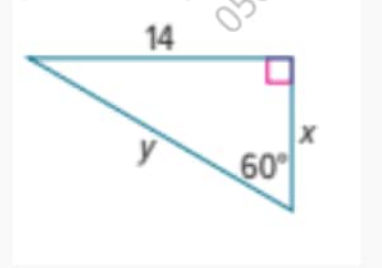
- A) $x = 24\sqrt{3}$, $y = 48\sqrt{3}$
B) $x = 24\sqrt{3}$, $y = 48$
C) $x = 48$, $y = 24\sqrt{3}$
D) $x = 12\sqrt{3}$, $y = 24$



D C B A

In the right triangle shown, the leg opposite the 60° angle is 14, the leg adjacent to the 60° angle is x , and the hypotenuse is y . Find the values of x and y .

- A) $x = 14\sqrt{3}, y = 28$
B) $x = \frac{14\sqrt{3}}{3}, y = \frac{14\sqrt{3}}{3}$
C) $x = \frac{14\sqrt{3}}{3}, y = \frac{28\sqrt{3}}{3}$
D) $x = 7, y = 14\sqrt{3}$



D	C	B	A
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Q13: Use the properties of 30° , 60° , 90° triangles.

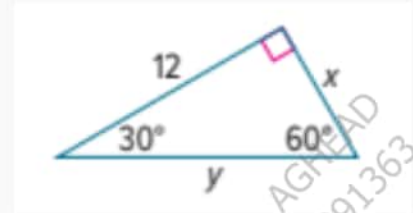
Page: 181, example 4.

الأسئلة الموضوعية - MCQ

Example 4 Find Leg Lengths in a 30° - 60° - 90° Triangle

In the $30^\circ - 60^\circ - 90^\circ$ right triangle shown, the leg opposite the 30° angle is x , the leg opposite the 60° angle is 12, and the hypotenuse is y . Find the values of x and y .

- A) $x = 4\sqrt{3}, y = 8\sqrt{3}$
- B) $x = 8\sqrt{3}, y = 4\sqrt{3}$
- C) $x = 6, y = 12$
- D) $x = 12\sqrt{3}, y = 24$

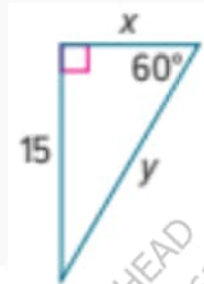


D	C	B	A
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Check

In the $30^\circ - 60^\circ - 90^\circ$ right triangle shown, the leg opposite the 60° angle is 15, the leg opposite the 30° angle is x , and the hypotenuse is y . Find the values of x and y .

- A) $x = 5, y = 10$
- B) $x = 5\sqrt{3}, y = 10\sqrt{3}$
- C) $x = 10\sqrt{3}, y = 5\sqrt{3}$
- D) $x = 15\sqrt{3}, y = 30$



D	C	B	A
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Q14: Use trigonometric ratios to find side lengths and angle measures of right triangles.

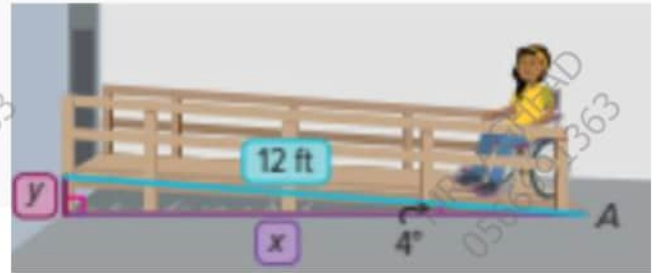
Page: 188, example 3.

الأسئلة الموضوعية - MCQ

Example 3 Estimate Measures by Using Trigonometry

Mathias builds a 12-foot ramp so his sister can access the back door of their house. The ramp slopes upward from the ground at a 4° angle. What is the horizontal distance x between the foot of the ramp and the house? Round your answer to the nearest hundredth.

- A) 0.84 feet
- B) 11.50 feet
- C) 11.97 feet
- D) 12.00 feet



D	C	B	A
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Mathias builds a 12-foot ramp so his sister can access the back door of their house. The ramp slopes upward from the ground at a 4° angle. What is the height y of the ramp? Round your answer to the nearest hundredth.

- A) 11.97 feet
- B) 1.05 feet
- C) 0.50 feet
- D) 0.84 feet

D	C	B	A
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Q15: Use trigonometric ratios to find side lengths and angle measures of right triangle

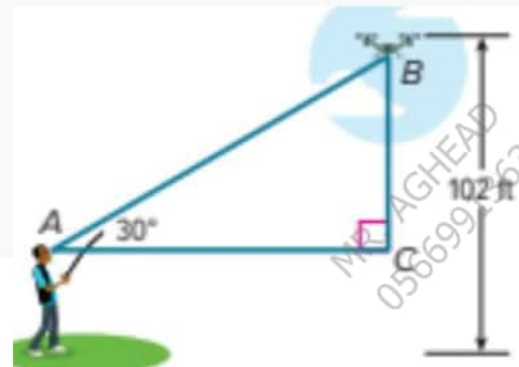
Page: 195, example 1.

الأسئلة الموضوعية - MCQ

Example 1 Angle of Elevation

Rakeem is flying his drone at the park. He spots the drone at an angle of elevation that he estimates to be 30° . The remote control tells Rakeem that his drone is 102 feet above the ground. If Rakeem is 6 feet tall, how far is he from the drone (AB) to the nearest foot?

- A) 192 feet
- B) 204 feet
- C) 96 feet
- D) 111 feet



D	C	B	A
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Check

Part A

A flare is shot vertically into the air approximately 200 meters from base camp. The angle of elevation to the maximum height of the flare is 35° . Which equation represents this situation if a represents the maximum height of the flare?

- A) $\sin 35^\circ = \frac{a}{200}$
- B) $\tan 35^\circ = \frac{a}{200}$
- C) $\cos 35^\circ = \frac{a}{200}$
- D) $\tan 35^\circ = \frac{200}{a}$

D	C	B	A
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Part B

A flare is shot vertically into the air approximately 200 meters from base camp. The angle of elevation to the maximum height of the flare is 35° . What is the maximum height of the flare to the nearest meter?

- A) 115 meters
- B) 286 meters
- C) 140 meters
- D) 164 meters

D	C	B	A
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Q16: Represent sample spaces.

Page: 366, example 2.

الأسئلة الموضوعية - MCQ

Example 2 Represent a Sample Space

Kembe has a black hat (B) and a red hat (R). He chooses one hat for each day, Saturday and Sunday. Which of the following represents the total sample space S for this experiment?

- A) $S = \{(R, R), (B, B)\}$
- B) $S = \{(R, R), (R, B), (B, R), (B, B)\}$
- C) $S = \{(R, B), (B, R)\}$
- D) $S = \{(R, R), (R, B), (B, B)\}$

D	C	B	A
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Check

A geometry teacher divides her class into Red (R), Yellow (Y), and Blue (B) groups for class projects. Which set of outcomes correctly completes the organized list for the sample space S of the next two class projects?

$$S = \{(R, R), (R, Y), _, (Y, R), _, _, (B, R), _, _ \}$$

- A) $(R, B), (Y, R), (B, R), (Y, Y), (B, B)$
B) $(R, R), (Y, Y), (B, B), (R, Y), (Y, R)$
C) $(R, B), (Y, Y), (Y, B), (B, Y), (B, B)$
D) $(B, R), (B, Y), (B, B), (R, R), (Y, Y)$

D

C

B

A

Q17: Use the Fundamental Counting Principle to count outcomes.

Page: 365, example 1.

الأسئلة الموضوعية - MCQ

Example 1 Define a Sample Space

A fair die is tossed once. What is the sample space S of the experiment?

- A) $S = \{1, 2, 3, 4, 5\}$
- B) $S = \{2, 4, 6\}$
- C) $S = \{1, 3, 5\}$
- D) $S = \{1, 2, 3, 4, 5, 6\}$

D	C	B	A
---	---	---	---

Q18: Find probabilities of dependent and independent events and solve related problems.

Page: 398, example 1.

الأسئلة الموضوعية - MCQ

Example 1 Probability of Independent Events

Ana is a member of a gaming website 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, disconnects, and is paired again with another player from the same pool of 50 players. What is the probability that neither player Ana is paired with is a friend of hers?

- A) $\frac{1}{25}$ or 4%
B) $\frac{16}{25}$ or 64%
C) $\frac{4}{25}$ or 16%
D) $\frac{9}{25}$ or 36%

D	C	B	A
---	---	---	---

Check

Paola's weather app tells her that there is a 20% chance of rain on Tuesday and a 50% chance of rain on Wednesday. Assuming these events are independent, what is the probability that it will rain on both Tuesday and Wednesday?

- A) 0.70 or 70%
- B) 0.30 or 30%
- C) 0.10 or 10%
- D) 0.01 or 1%

D	C	B	A
---	---	---	---

Q19: Find probabilities of events given the occurrence of other events and solve related problems.

Page: 400, example 3.

الأسئلة الموضوعية - MCQ

Example 3 Probability of Dependent Events

The pizza that José and Tessa are eating has 10 slices and is half cheese and half mushroom. Tessa randomly selects a slice of mushroom pizza and eats it. If José randomly selects a slice after that, what is the probability that both he and Tessa selected a slice of mushroom pizza?

- A) $\frac{1}{4}$ or 25%
- B) $\frac{5}{9}$ or about 56%
- C) $\frac{1}{2}$ or 50%
- D) $\frac{2}{9}$ or about 22%

D	C	B	A
---	---	---	---

Check

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 students got all the questions correct on the test?

- A) $\frac{1}{114}$ or about 0.88%
- B) $\frac{1}{64}$ or about 1.56%
- C) $\frac{1}{57}$ or about 1.75%
- D) $\frac{3}{20}$ or 15%

D	C	B	A
---	---	---	---

Q20: Find probabilities of events given the occurrence of other events and solve related problems.

Page: 402, (13-15).

الأسئلة الموضوعية - MCQ

Mixed Exercises

The format used to determine an overall champion varies by sport. One type of format used is the best-of-seven series, where up to seven games are played and four wins determine a champion. If you assume that each team has an equal chance of winning each game, what is the probability of a specific team winning the first four games in a best-of-seven series?

- A) $\frac{1}{4}$ or 25%
B) $\frac{1}{16}$ or 6.25%
C) $\frac{1}{8}$ or 12.5%
D) $\frac{1}{32}$ or 3.125%

D	C	B	A
---	---	---	---

A sales management team consists of three directors and three assistant directors. To ensure that each team member has an equal chance to be chosen to represent the team at a national conference, all 6 names are placed into a hat and four names are drawn at random. What is the probability that those chosen will consist of 3 directors and 1 assistant director?

- A) $\frac{1}{5}$ or 20%
B) $\frac{2}{5}$ or 40%
C) $\frac{1}{5}$ or 20%
D) $\frac{3}{15}$ or 20% (Wait: $\frac{\binom{3}{3} \times \binom{3}{1}}{\binom{6}{4}} = \frac{1 \times 3}{15} = \frac{1}{5}$)

D	C	B	A
---	---	---	---

Iris performs a magic trick in which she holds a standard deck of 52 cards and has each of three people randomly choose a card from the deck. Each person keeps his or her card as the next person draws. What is the probability that all three people will draw a heart (Heart)?

- A) $\frac{11}{850}$ or about 1.29%
B) $\frac{1}{64}$ or about 1.56%
C) $\frac{13}{2042}$ or about 0.64%
D) $\frac{11}{850}$ or about 1.29%

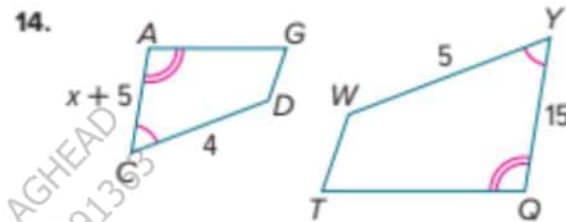
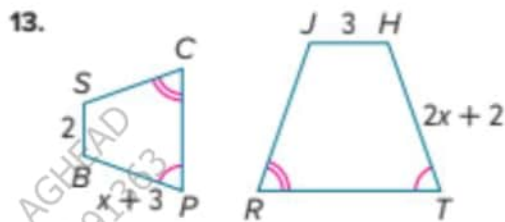
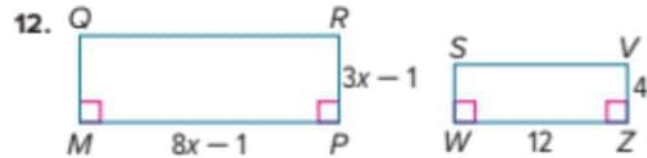
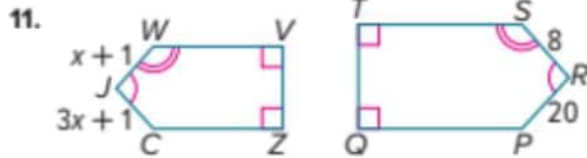
D	C	B	A
---	---	---	---

Q21: Solve problems using the properties of similar polygons.

Page 128, (11-14).

الأسئلة المقالية - FRQ

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



11. 3.

12. 2.

13. 5.

14. 7.

Q22: Use proportional parts within triangle.

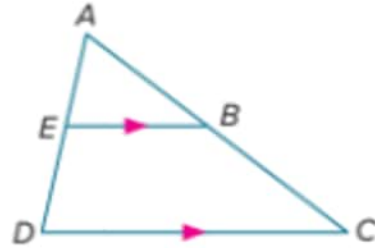
Page 145, (1-4)

الأسئلة المقالية - FRQ

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 .



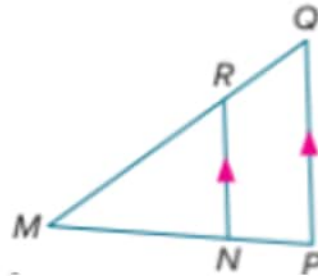
1. 6.

2. 15.

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 $PM = 4PN$



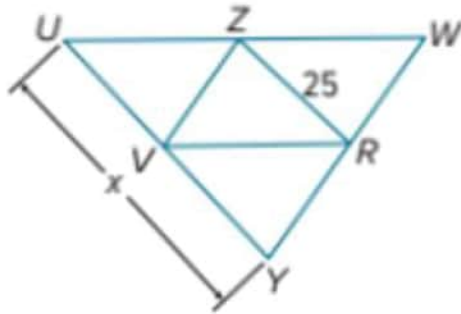
3. yes.

4. no.

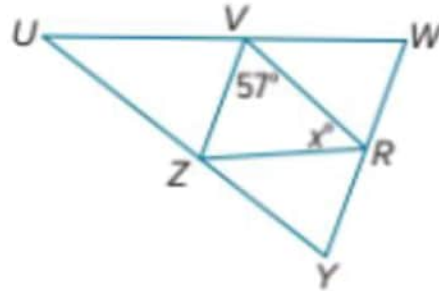
Example 3

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

5.



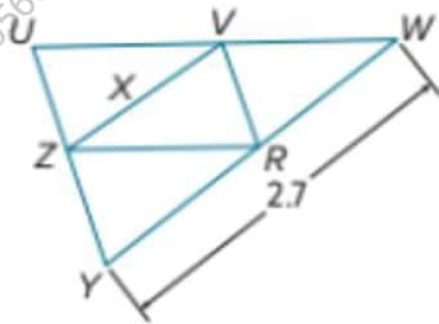
6.



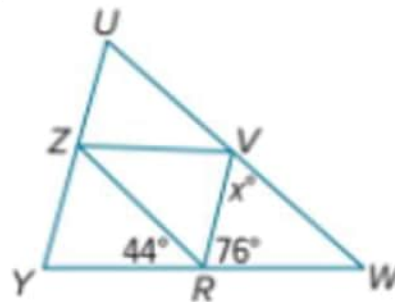
5. 50.

6. 57.

7.



8.



7. 1.35.

8. 60.

Example 4

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



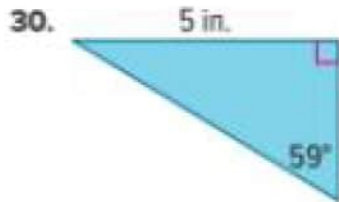
9. 1.12 km.

Q23: Use trigonometric ratios to find side lengths and angle measures of right triangles.

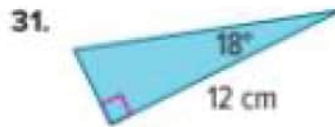
Page 193, (30- 32)

الأسئلة المقالية - FRQ

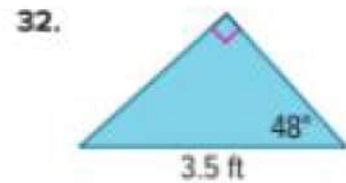
REASONING Find the perimeter and area of each triangle. Round to the nearest hundredth.



المحيط (Perimeter): 13.83 in.
المساحة (Area): 7.51 in^2



المحيط (Perimeter): 28.52 cm
المساحة (Area): 23.39 cm^2



المحيط (Perimeter): 8.44 ft
المساحة (Area): 3.04 ft^2

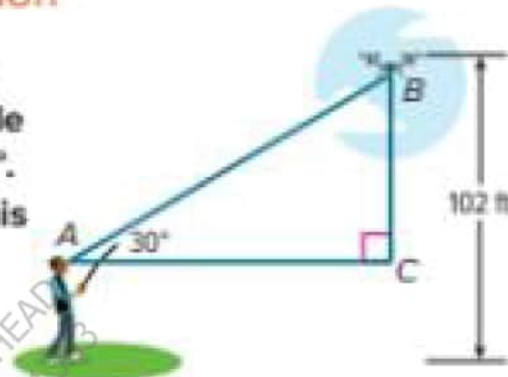
Q24: Solve applied problems involving angles of elevation and depression.

Page 195, example 1.

الأسئلة المقابلة - FRQ

Example 1 Angle of Elevation

DRONES Rakeem is flying his drone at the park. He spots the drone at an angle of elevation that he estimates to be 30° . The remote control tells Rakeem that his drone is 102 feet above the ground. If Rakeem is 6 feet tall, how far is he from the drone to the nearest foot?



Because Rakeem is 6 feet tall, $BC = 102 - 6$ or 96 feet. Let x represent the distance from Rakeem to the drone AB .

$$\sin A = \frac{BC}{AB}$$

$$\sin 30^\circ = \frac{96}{x}$$

$$x = \frac{96}{\sin 30^\circ}$$

$$x = 192$$

$$\sin = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$m\angle A = 30^\circ, BC = 96, \text{ and } AB = x$$

Solve for x .

Use a calculator.

Check

SEARCH AND RESCUE A flare is shot vertically into the air approximately 200 meters from base camp. The angle of elevation to the maximum height of the flare is 35° . The group at base camp needs to know the altitude of the flare.

Part A Write the equation that represents the situation if a represents the height of the flare.

Part B What is the maximum height of the flare to the nearest meter?

Part A: $\tan 35 = a/200$.

Part B: 140.

Q25: Find probabilities of dependent and independent events and solve related problems.

Page 403, (18-20).

الأسئلة المقالية - FRQ

Sunita and Derek work for a company that produces microchips. Part of their job is to estimate the number of defective chips given the total number produced. The table shows the estimated contents of 2 boxes of microchips. Use this information for Exercises 18 and 19.

18. Derek randomly selects one chip from Box B, does not put it back, and then randomly selects another chip from Box B. What is the probability that both chips are defective? Explain.

	Number of Chips	Defective
Box A	100	4%
Box B	150	2%

19. Sunita randomly selects one chip from Box A, and then she randomly selects another chip from Box A. The probability that both chips are defective is $\frac{1}{625}$. Did Sunita replace the first chip before selecting the second one? Explain.

20. TRAVEL A travel agency conducts a survey to determine whether people drive (D) or fly (F) to their vacation destinations. The results indicated that $P(D) = 0.6$, $P(D \cap F) = 0.2$, and the probability that a family did not vacation is 0.1.

- What is the probability that a family reached their vacation destination by flying?
- What is the probability that a family that drives will also fly?



- 0.3
- 0.33

Q26: Find the probability of mutually and non-mutually exclusive events and solve related problems.

Page: 408, example 3.

الأسئلة المقالية - FRQ

A game piece is selected at random from the plate at the right. What is the probability that the game piece is round or orange?



Because some of the game pieces are both round and orange, these events are not mutually exclusive. Use the rule for two events that are not mutually exclusive. The total number of game pieces from which to choose is 10.

$$\begin{aligned}P(\text{round or orange}) &= P(\text{round}) + P(\text{orange}) - P(\text{round and orange}) \\&= \frac{5}{10} + \frac{4}{10} - \frac{2}{10} \\&= \frac{7}{10}\end{aligned}$$

The probability that a game piece will be round or orange is $\frac{7}{10}$ or 70%.

Check

A polygon is chosen at random. Find the probability of each set of events.



choosing a figure that has more than 4 lines of symmetry or more than 7 sides	$\longleftrightarrow$	<u> ?</u>
choosing a figure that has more than 15 diagonals or a total interior angle measure greater than 900°	$\longleftrightarrow$	<u> ?</u>
choosing a figure that has more than 2 pairs of parallel sides or at least 1 diagonal	$\longleftrightarrow$	<u> ?</u>

%75

%37.5

%87.5



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مع أطيب التمنيات بالنجاح والتوفيق ...
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