

تجميعة أسئلة شاملة وفق الهيكل الوزاري الجديد منهج ريفيل



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: 2025-10-24 14:43:01

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

المزيد من مادة رياضيات:

إعداد: Mohsen-Abdel Soaad

التواصل الاجتماعي بحسب 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

ملزمة تجميعة أسئلة وفق الهيكل الوزاري منهج بريدج بدون الحل

1

نموذج إجابة تجميعة شاملة وفق كامل الهيكل الوزاري منهج بريدج

2

تجميعة شاملة وفق كامل الهيكل الوزاري منهج بريدج بدون الحل

3

حل أوراق عمل الوحدة الأولى التناسب والتشابه

4

أوراق عمل الوحدة الأولى التناسب والتشابه

5



وزارة التربية والتعليم
MINISTRY OF EDUCATION

الهيكل – Exam Guide
Trimester 1 – Mathematics
G11 – General – Reveal

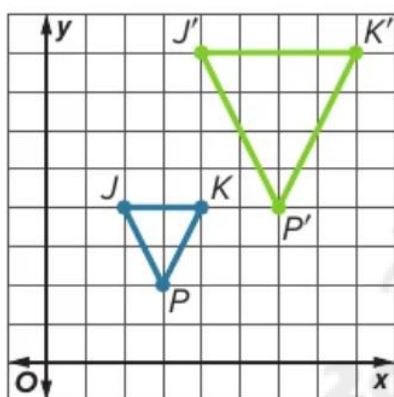
Al Rawdah Al Sharqiah New Common School

Soaad Abdel-Mohsen

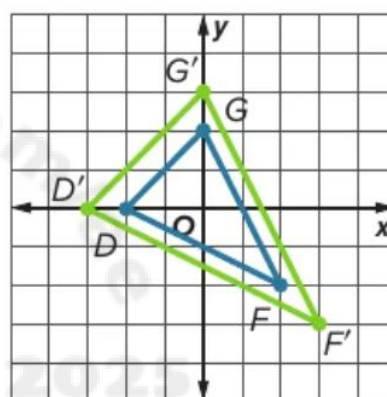
1. Find the Scale factor of Dilation Ex(10-18) Page 120

Find the scale factor of the dilation.

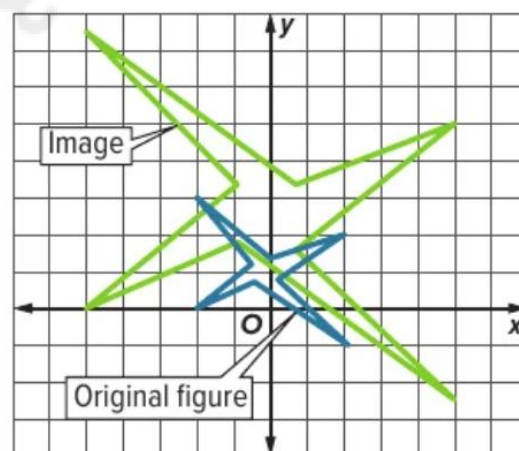
10. $\triangle J'K'P'$ is the image of $\triangle JKP$.



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?



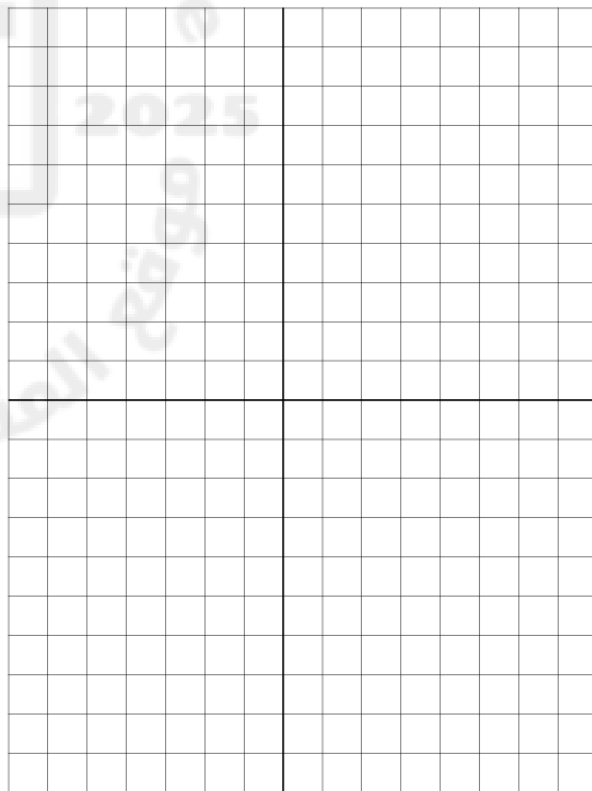
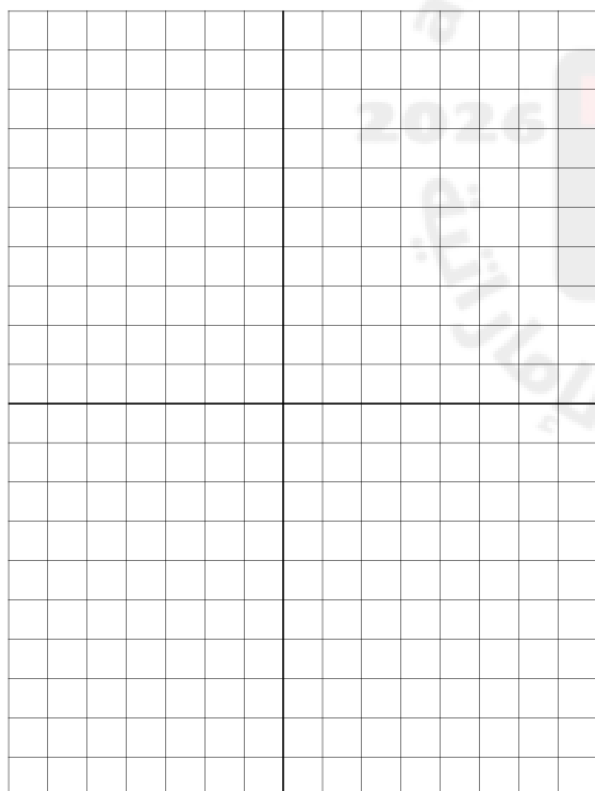


Final Revision – Trimester 1

G11 – General - REVEAL

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



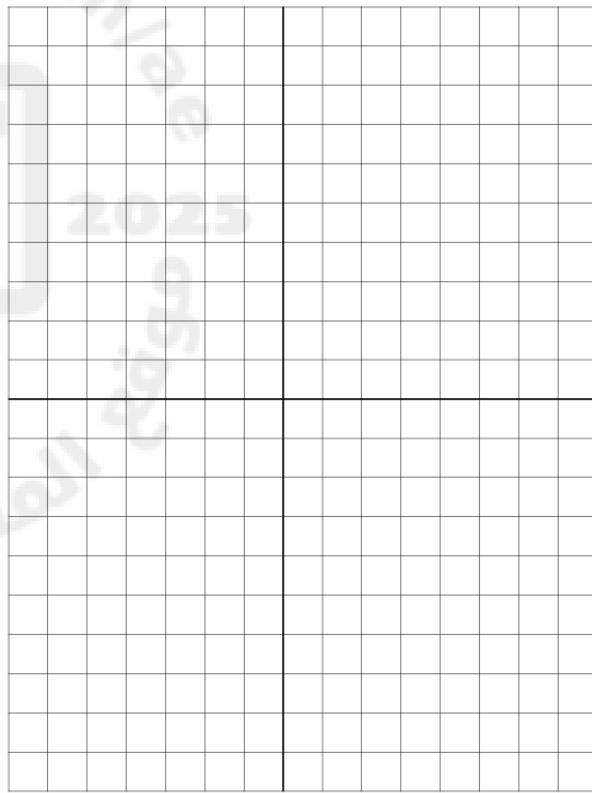
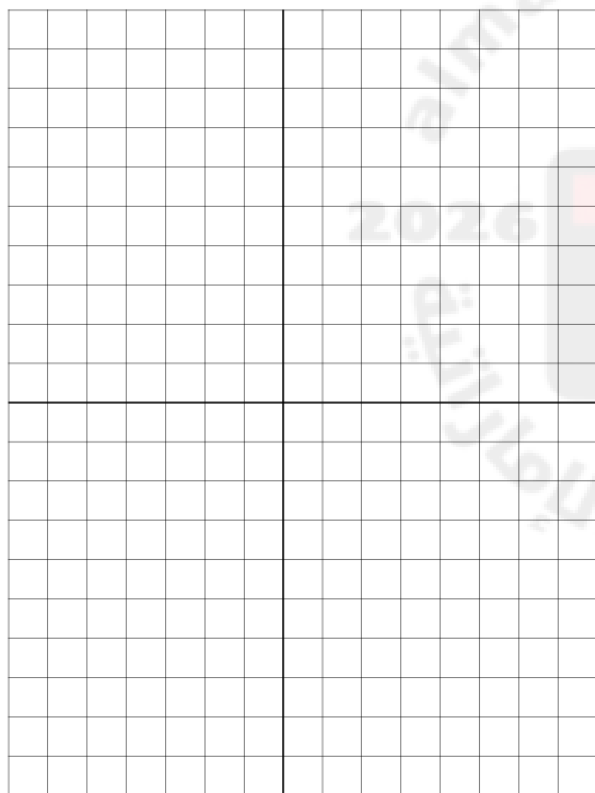


Final Revision – Trimester 1

G11 – General - REVEAL

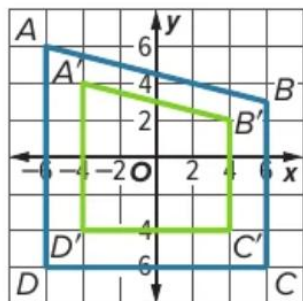
15. $M(4, 6), N(-6, 2), P(0, -8), k = \frac{3}{4}$

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

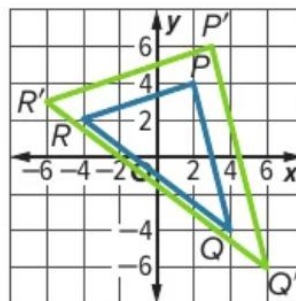


Find the scale factor of the dilation.

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



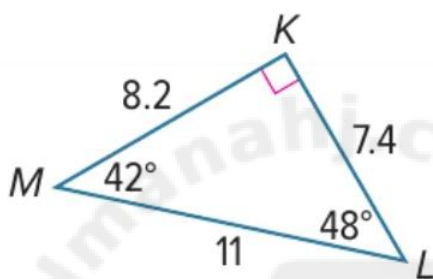
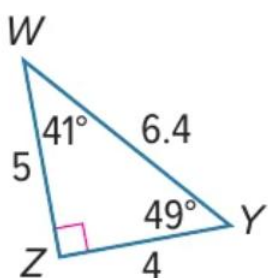
18. $\triangle P'Q'R'$ is the image of $\triangle PQR$.



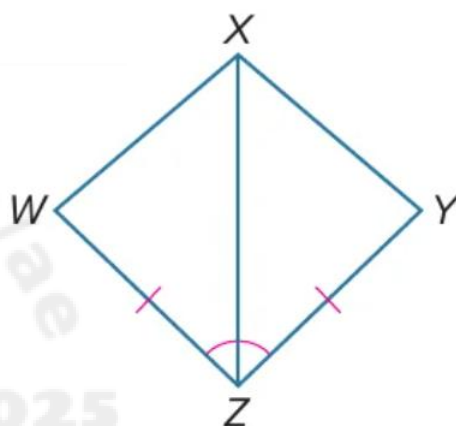
2. Use proportions to identify similar polygons Ex(7-10) page 128

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

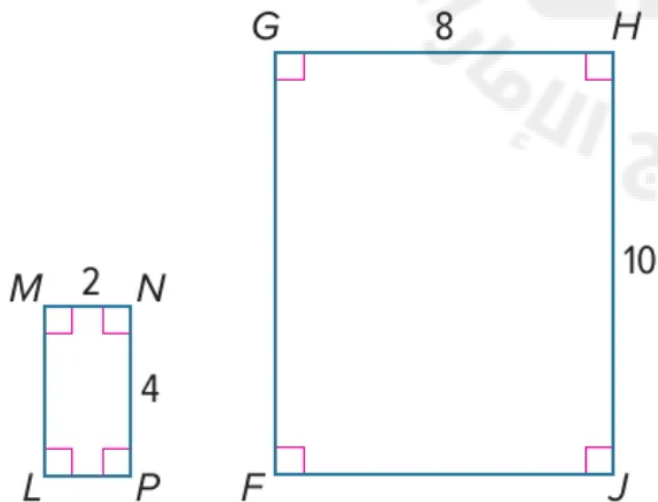
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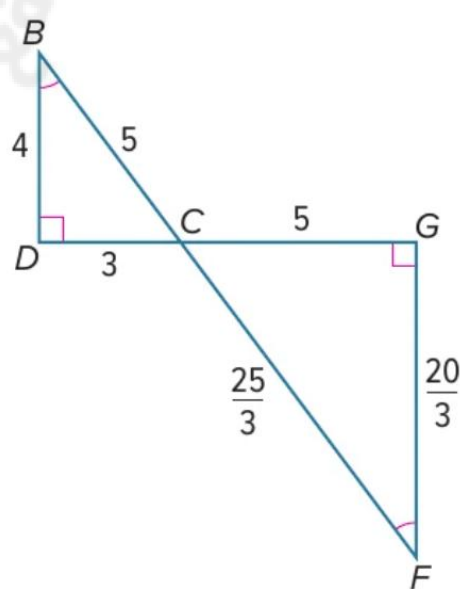
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9.



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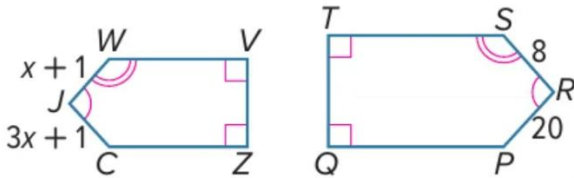




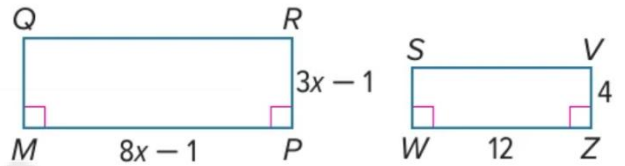
3. Solve problems using the properties of similar polygons Ex 11-14 Page 128

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

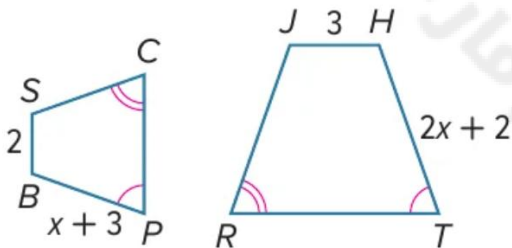
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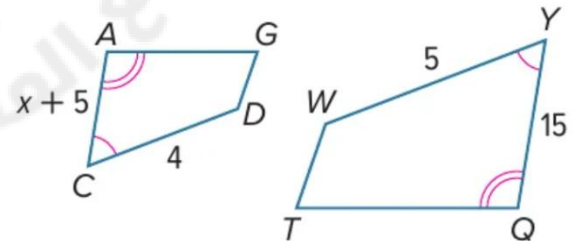
12.



13.



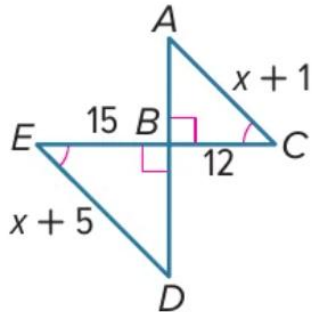
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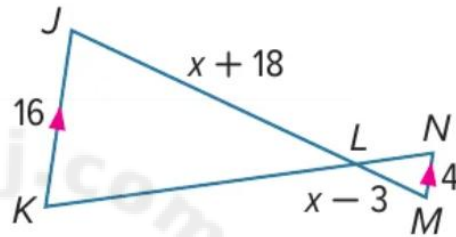
4. Use similar triangles to solve problems Ex 9-12 Page 134

Identify the similar triangles. Then find each measure.

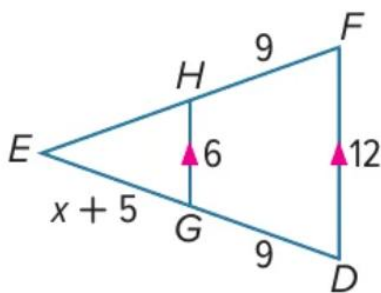
9. AC



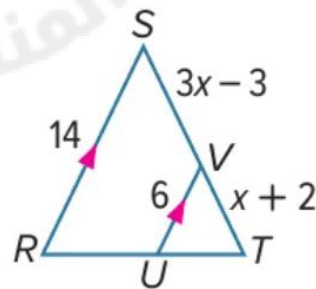
10. JL



11. EH



12. VT

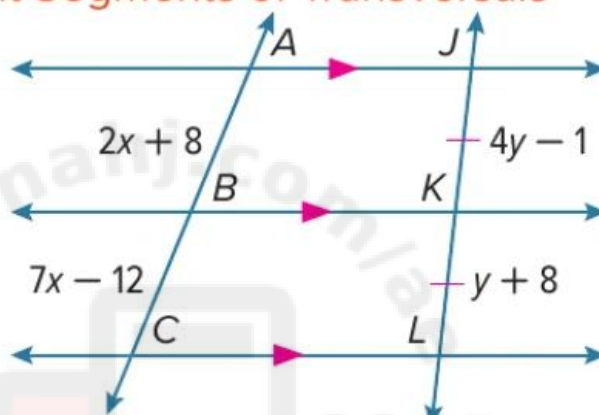


5. Use proportional parts with parallel lines Example 5 Page 144

Example 5 Use Congruent Segments of Transversals

Find the values of x and y .

Because $\overrightarrow{AJ} \parallel \overrightarrow{BK} \parallel \overrightarrow{CL}$ and $\overline{JK} \cong \overline{KL}$, then $\overline{AB} \cong \overline{BC}$.



Find the value of x .

$$AB = BC$$

$$2x + 8 = 7x - 12$$

$$8 = 5x - 12$$

$$20 = 5x$$

$$4 = x$$

Definition of congruence

Substitution

Subtract $2x$ from each side.

Add 12 to each side.

Divide each side by 5.

Find the value of y .

$$JK = KL$$

$$4y - 1 = y + 8$$

$$3y - 1 = 8$$

$$3y = 9$$

$$y = 3$$

Definition of congruence

Substitution

Subtract y from each side.

Add 1 to each side.

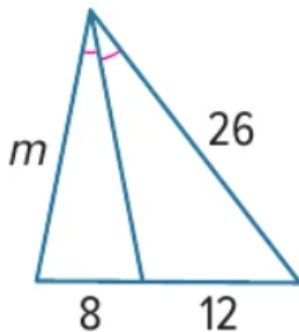
Divide each side by 3.



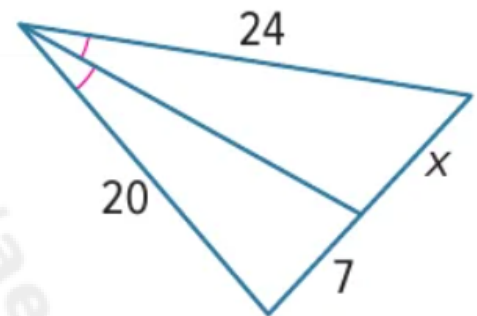
6. Recognize and use proportional relationships of corresponding angle bisectors, altitudes, and medians of similar triangles Ex 8-9 page 153

Find the value of each variable to the nearest tenth.

8.



9.



7. Find the geometric mean between two numbers Ex 1-6 Page 165

Find the geometric mean between each pair of numbers.

1. 4 and 6

2. $\frac{1}{2}$ and 2

3. 4 and 25

4. 12 and 20

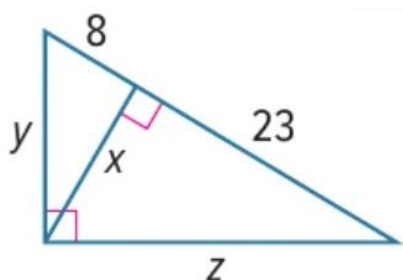
5. 17 and 3

6. 3 and 24

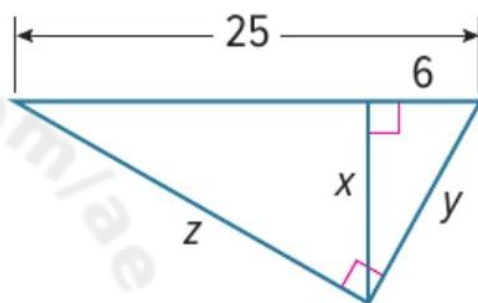
8. Solve problems involving relationships between parts of a right triangle and the altitude to its hypotenuse Ex 11-14 Page 165

Find the values of x , y , and z .

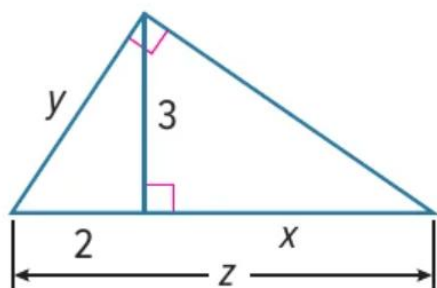
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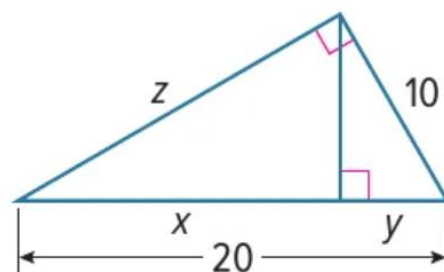
12.



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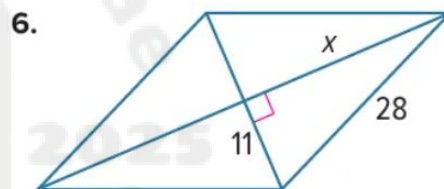
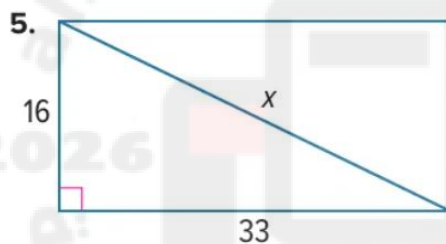
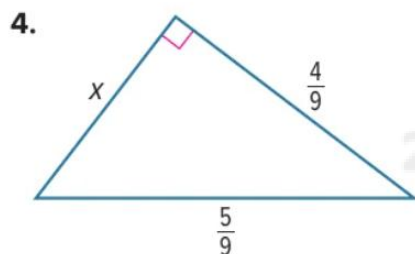
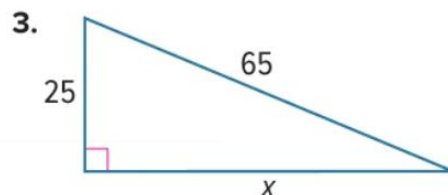
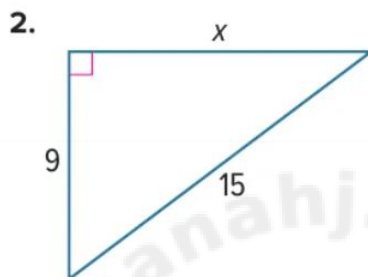
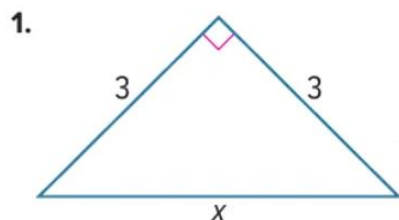
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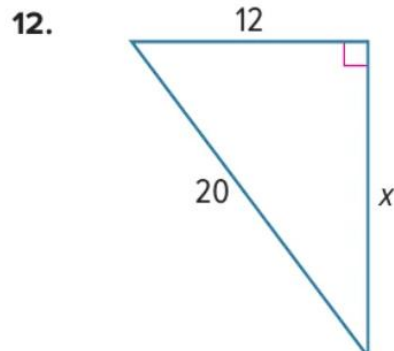
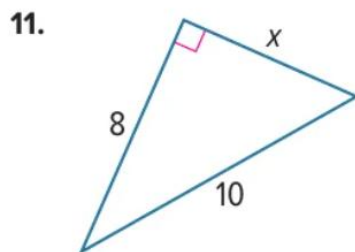
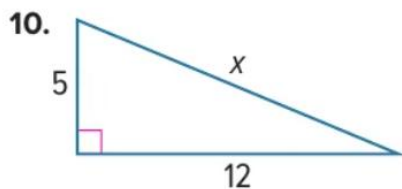
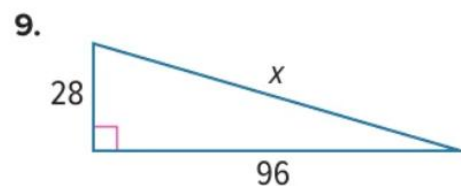
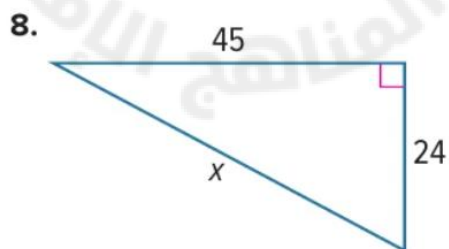
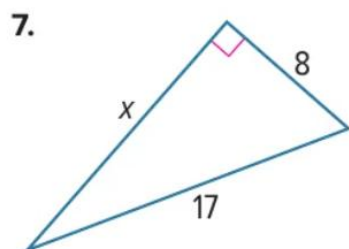


9. Use the Pythagorean Theorem Ex 1-12 Page 171

Find the value of x .



Use a Pythagorean Triple to find the value of x .





10. Use The Converse of the Pythagorean Theorem EX 20-22 Page 172

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

21. 2, $\sqrt{8}$, $\sqrt{12}$

22. 9, 40, 41





11. Find the distance between two points on the coordinate plane Ex 13-18 page 177

Determine the coordinates of the midpoint M of the segment joining each pair of points.

13. $K(-2, -4, -4)$ and $L(4, 2, 0)$

14. $W(-1, -3, -6)$ and $Z(-1, 5, 10)$

15. $R(3, 3, 4)$ and $V(5, 4, 13)$

16. $A(4, 6, -8)$ and $B(0, 0, 0)$

17. $C(8, 7, 11)$ and $D(2, 1, 8)$

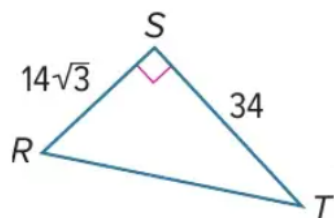
18. $T(-1, -7, 9)$ and $U(5, -1, -6)$



12. Find values of trigonometric ratios Ex 19-21 Page 192

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

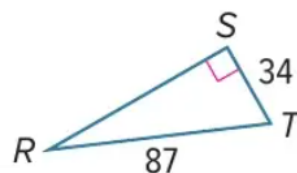
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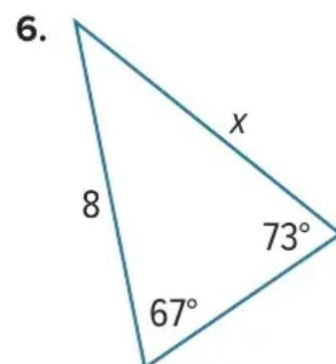
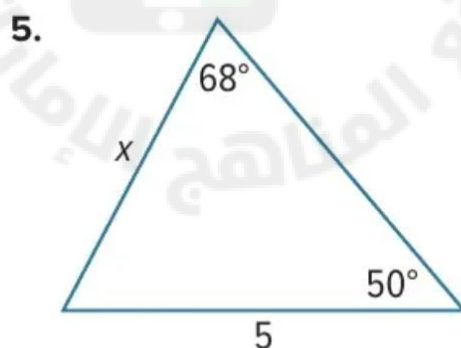
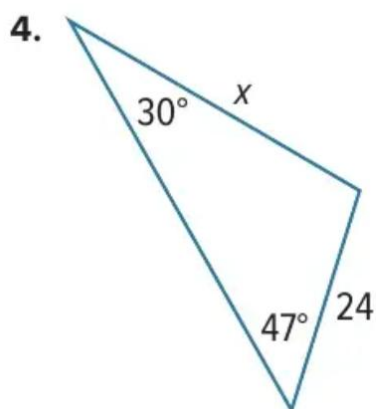
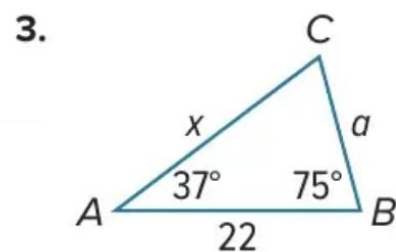
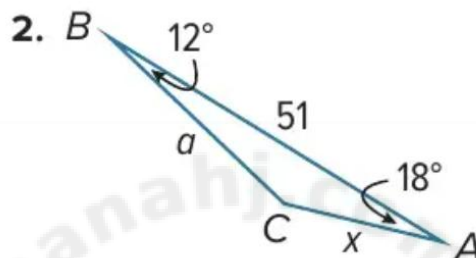
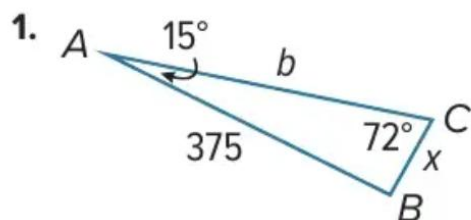
21.





13. Use the Law of Sines to solve triangle Ex 1-6 Page 207

Find the value of x to the nearest tenth.

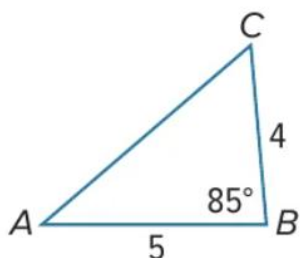




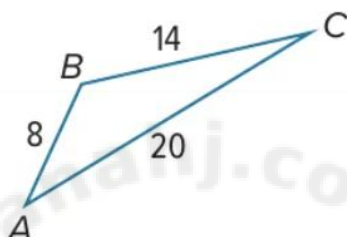
14. Use the Law of Cosines to solve triangles Ex 9-14 Page 215

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

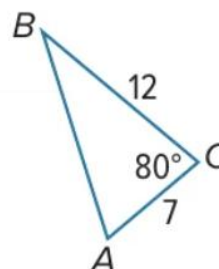
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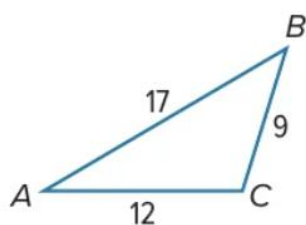
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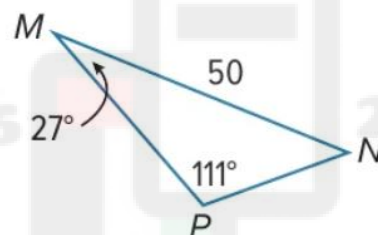
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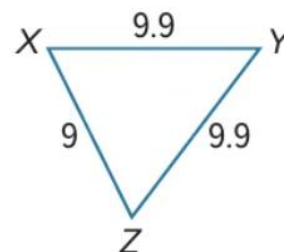
12.



13.



14.





15. Use the Fundamental Counting Principle to count outcomes Example 4 Page 368

Example 4 Use the Fundamental Counting Principle

COLLEGE 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

You can estimate the total number of different schedules he can make. There are about 10 sections of the mathematics course offered. For each of the other four courses, there are about 5 sections offered. Multiply to estimate that Santiago can create about 6250 schedules.

Find the number of possible outcomes by using the Fundamental Counting Principle to complete the equation.

Art History	French	Mathematics	Art	English	Possible Outcomes
6	5	9	4	6	= 6480

Santiago could create 6480 different schedules. Because 6480 is close to the estimate of 6250, the answer is reasonable.



16. Represent sample spaces Example 1 Page 365

Example 1 Define a Sample Space

A fair die is tossed once.

a. What is the sample space of the experiment?

The sample space S includes all possible outcomes of rolling a die.

$$S = \{1, 2, 3, 4, 5, 6\}$$

b. What is the sample space for the event of rolling a prime number? Write the outcomes to complete the sample space.

The sample space S (prime number on a die) includes all prime numbers less than 6.

$$S(\text{prime number on a die}) = \{2, 3, 5\}$$



17. Find the intersection, union, and difference among sets Example 1 Page 373

Example 1 Find Intersections

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 $A \cap B$.

The possible outcomes for event A are all the numbers on a die that are odd, or $\{1, 3, 5\}$.

The possible outcomes for event B are all the numbers on a die that are greater than 3, or $\{4, 5, 6\}$.

$A \cap B$ contains all of the outcomes that are in both sample space A and B .

$$A \cap B = \{5\}$$



18. Find probabilities of dependent and independent events and solve related problems

Example 1 Page 398

Example 1 Probability of Independent Events

GAMING 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?

These events are independent because the set of possible matches is reset to 50 once Ana disconnects. Let F represent a player who is Ana's friend and NF represent a player who is not Ana's friend.

Complete the equation to determine the probability of independent events.

$$\begin{aligned}
 & \text{User 1} \quad \text{User 2} \\
 P(NF \text{ and } NF) &= P(NF) \cdot P(NF) \\
 &= \frac{40}{50} \cdot \frac{40}{50} \quad P(NF) = \frac{40}{50} \\
 &= \frac{1600}{2500} \text{ or } \frac{16}{25} \quad \text{Simplify.}
 \end{aligned}$$

So, the probability that neither of the two players is Ana's friend is $\frac{16}{25}$ or 64%.

- b. What assumption do you have to make in order to solve this problem?

We assume that the same 50 players remain in the set for both selections. If the number of available players changes, or the number of available players who are friends with Ana changes, the probability will change.

19. Find the probability of mutually and non-mutually exclusive events and solve related problems Example 2 Page 406

Example 2 Probability of Mutually Exclusive Events

SOCIAL MEDIA Daniel organizes all of his social media contacts into three groups. If the program sends Daniel an update from a randomly chosen contact, what is the probability that the contact is either a close friend or acquaintance?



These are mutually exclusive events, because the contacts selected cannot be a close friend and an acquaintance.

Let event F represent selecting a close friend. Let event A represent selecting an acquaintance. There are a total of $10 + 68 + 24$ or 102 contacts.

Because the events are mutually exclusive, you know that

$$P(F \text{ or } A) = P(F) + P(A).$$

$$P(F \text{ or } A) = P(F) + P(A)$$

$$= \frac{68}{102} + \frac{24}{102}$$

$$= \frac{92}{102} \text{ or } \frac{46}{51}$$

Probability of mutually exclusive events

$$P(F) = \frac{68}{102} \text{ and } P(A) = \frac{24}{102}$$

Add.

So the probability that the update is from a close friend or acquaintance is $\frac{46}{51}$ or about 90%.



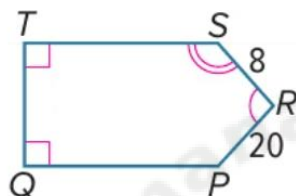
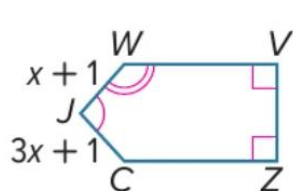
Final Revision – Trimester 1

G11 – General - REVEAL

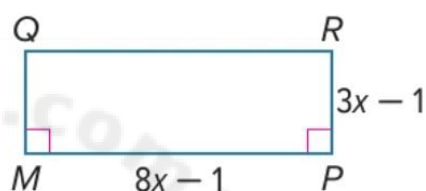
20. Visualize, describe, and solve problems using the perimeters of similar polygons.

Ex 11-14 page 128

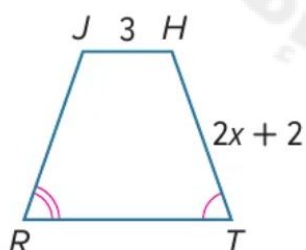
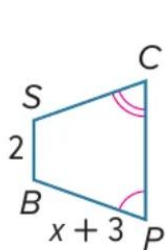
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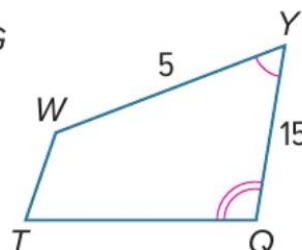
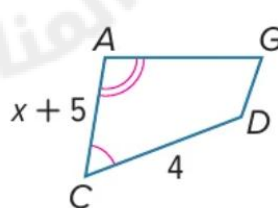
12.



13.



14.

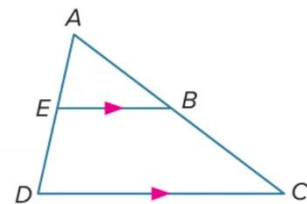


21. Solve problems and prove theorems by using triangle proportionality

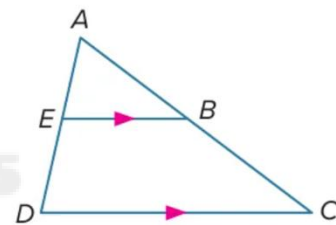
Ex 1-6 Page 145

Use the figure at the right.

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

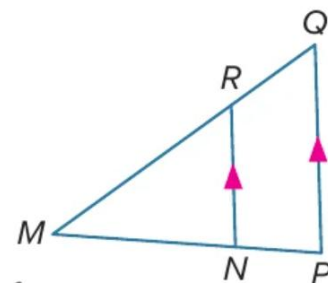


2. If $AB = 12$, $AC = 16$, and $ED = 5$, find AE .

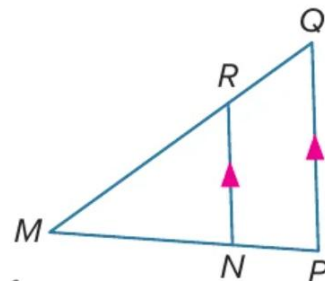


Determine whether $\overline{NR} \parallel \overline{PQ}$. Justify your answer.

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



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



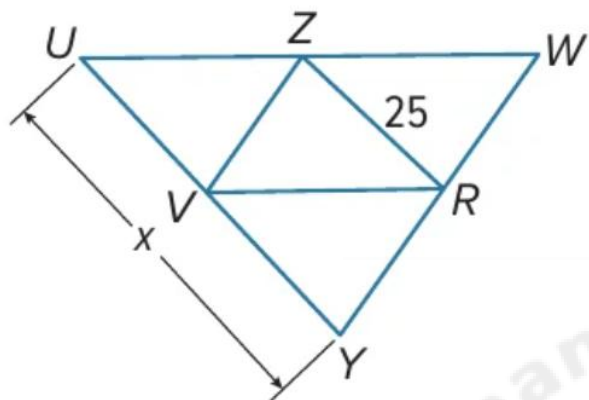


Final Revision – Trimester 1

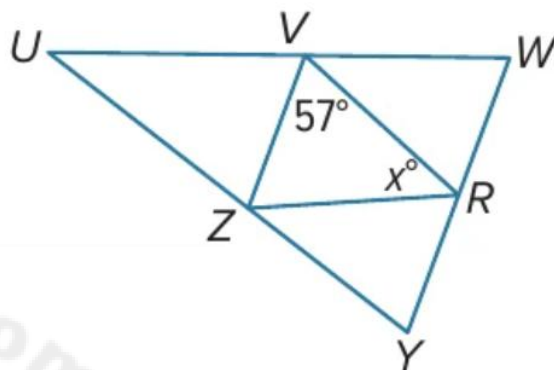
G11 – General - REVEAL

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

5.



6.

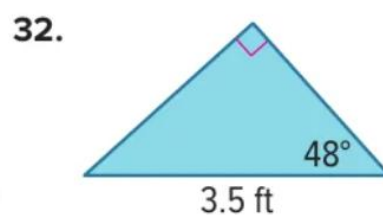
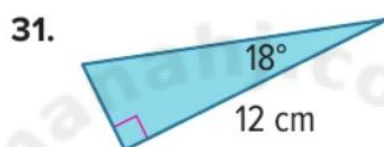
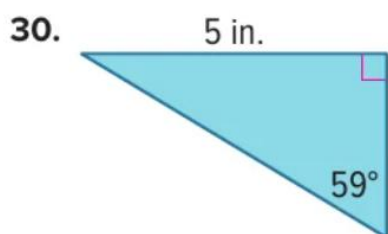




22. Use trigonometric ratios to find side lengths and angle measures of right triangles

Ex 30 – 32 Page 193

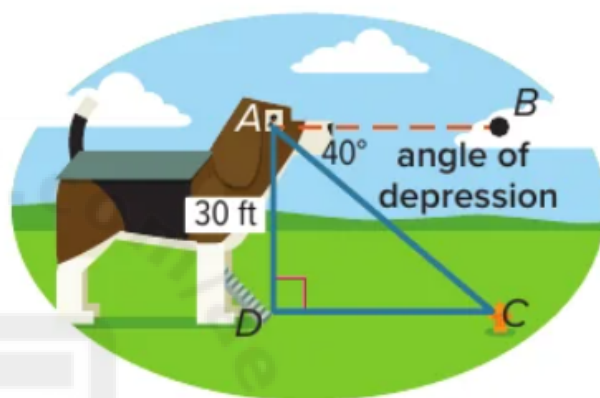
REASONING Find the perimeter and area of each triangle. Round to the nearest hundredth.



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

Example 2 Page 196

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?



Because $\overline{AB}$ and $\overline{DC}$ are parallel, $m\angle BAC = m\angle ACD$ by the Alternate Interior Angles Theorem.

Let x represent the horizontal distance from the base of the hotel to the hydrant.

$$\tan C = \frac{AD}{DC}$$

$$\tan = \frac{\text{opposite}}{\text{adjacent}}$$

$$\tan 40^\circ = \frac{30}{x}$$

$$C = 40^\circ, AD = 30, \text{ and } DC = x$$

$$x \tan 40^\circ = 30$$

Multiply each side by x .

$$x = \frac{30}{\tan 40^\circ}$$

Divide each side by $\tan 40^\circ$.

$$x \approx 35.8$$

Use a calculator.

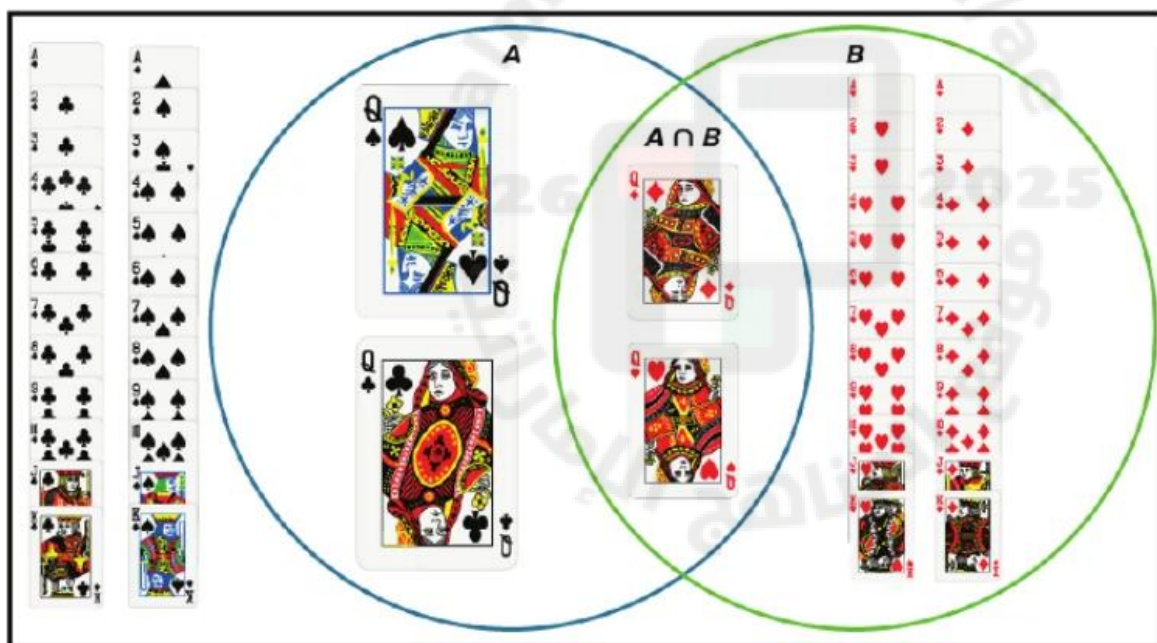
The horizontal distance from Pedro to the hydrant is about 36 feet.

24. Find the intersection, union, and difference among sets Example 2-3 Page 374 - 375

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?

Let A be the event of choosing a queen, and let B be the event of choosing a red card. The total number of outcomes is the total number of cards in a deck, or 52.



From the diagram, there are only 2 red cards that are also queens.

$$P(A \cap B) = \frac{\text{number of outcomes in } A \text{ and } B}{\text{total number of possible outcomes}} \quad \text{Probability Rule for Intersections}$$

$$= \frac{2}{52} \quad \text{Substitution}$$

$$= \frac{1}{26} \quad \text{Simplify.}$$

The probability that the card is both a queen and is red is $\frac{1}{26}$, or about 3.8%.



Example 3 Find Unions

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 $A \cup B$.

The possible outcomes for event A are all the numbers on a die that are less than 5, or $\{1, 2, 3, 4\}$.

The possible outcomes for event B are all the numbers on a die that are multiples of 2, or $\{2, 4, 6\}$.

$A \cup B$ contains all of the outcomes that are in either sample space(s) A or B .

$$A \cup B = \{1, 2, 3, 4, 6\}$$



25. Find probabilities of dependent and independent events and solve related problems

Example 3 Page 400

Example 3 Probability of Dependent Events

FOOD The pizza that José 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 José spins the pizza and selects a slice after that, what is the probability that both he and Tessa select a slice of mushroom pizza?

These events are dependent because Tessa does not replace the slice she selected. Let M represent a slice of mushroom pizza and C represent a slice of cheese pizza.

$$P(M \text{ and } M) = P(M) \cdot P(M|C) \quad \text{Probability of dependent events}$$

$$= \frac{5}{10} \cdot \frac{4}{9} \text{ or } \frac{2}{9}$$

After the first slice of mushroom pizza is selected, 9 total pieces remain, and 4 of those slices have mushrooms.

So, the probability that both friends randomly select slices with mushrooms is $\frac{2}{9}$ or about 22%.