شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية

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موقع المناهج الإماراتية

حل نموذج أسئلة وفق الهيكل الوزاري

التواصل الاجتماعي بحسب الصف العاشر العام

روابط مواد الصف العاشر العام على تلغرام

التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات

المزيد من الملفات بحسب الصف العاشر العام والمادة رياضيات في الفصل الثاني

1	حل أسئلة الامتحان النهائي الالكتروني - بريدج
2	دليل تصحيح أسئلة الامتحان الورقي - بريدج
3	أسئلة الامتحان النهائي الورقي - بريدج
4	حل مراجعة نهائية وفق الهيكل الوزاري
5	حل مراجعة الوحدة السابعة المثلثات قائمة الزاوية وحساب المثلثات

مؤسسة الإمارات للتعليم المدرسي

مدرسة الحصن الثانويـة

مراجعـــة

أسئلة الهيكل

المادة: رياضيات

الصف العاشر العام

الفصل الدراسي الثاني 2023/2022

أبنائي الطلاب ....

العلم هو الوسيلة الوحيدة التي يرتفع به شان الانسان إلى مراتب الكرامة والشرف....

اعداد

ا. مصطفى عبد العزيز

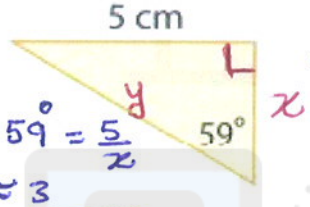
مدرسة الحصن الثانوية

PART 1

1)The area of the triangle:

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

51.



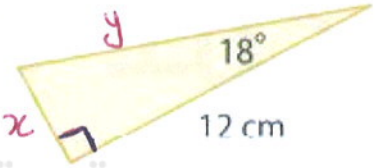
- $\tan 59^\circ = \frac{5}{x}$

$x \approx 3$

$\Rightarrow y = \sqrt{3^2+5^2} \approx 5.8$

- Perimeter $= 5+3+5.8 = 13.8$ cm
- Area $= \frac{5 \times 3}{2} = 7.5\ cm^2$

52.



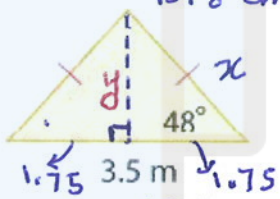
$\tan 18^\circ = \frac{x}{12}$

$x \approx 3.22$

$y = \sqrt{3.22^2+12^2} \approx 12.42$

- Perimeter $= 12+3.22+12.42 = 27.64$ cm
- Area $= \frac{3.22 \times 12}{2} = 19.32\ cm^2$

53.



$\cos 48^\circ = \frac{1.75}{x}$

$x \approx 2.6$ m

$\tan 48^\circ = \frac{y}{1.75} \Rightarrow y \approx 1.9$

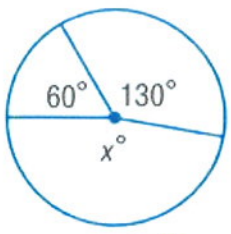
Perimeter $= 2.6+2.6+3.5 = 8.7$ m

Area $= \frac{3.5 \times 1.9}{2} = 3.325\ m^2$.

2)Classify the type of angle

Find the value of x

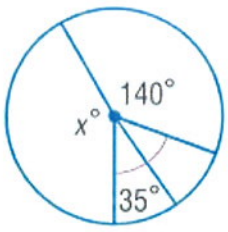
1.



$x = 360^\circ - 130^\circ - 60^\circ$

$= 170^\circ$

2.

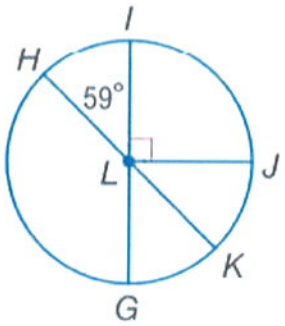


$x = 360^\circ - 70^\circ - 140^\circ$

$x = 150^\circ$

35
35
70

3. $\overline{HK}$ and $\overline{IG}$ are diammetres of ⊙L. Identify each arc as a major arc minor arc, or semicircle. Then find its measure



3. $m\widehat{IHJ}$ = 180° (Semicircle)

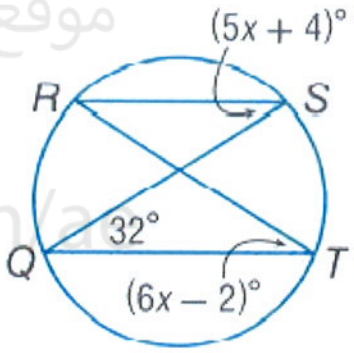
4. $m\widehat{HI}$ = 59° × 2 = 118°

5. $m\widehat{HGK}$ = 180° (Semicircle)

3)The relationship between opposite angles in the vertex

Find each measure.

17) $m\angle R$ = 32°



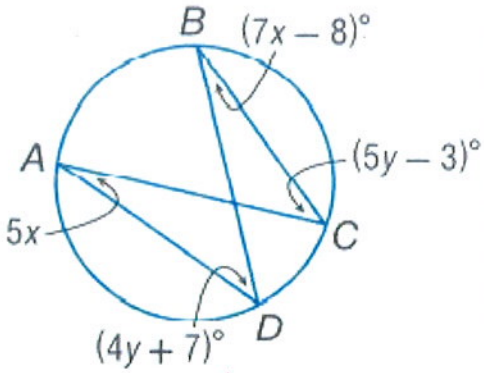
18) $m\angle S$

since, $6x - 2 = 5x + 4$

$x = 6$

$m\angle S = 5(6) + 4 = 34°$

19) $m\angle A$



$7x - 8 = 5x$

$2x = 8$

$x = 4$

$m\angle A = 5(4) = 20°$

20) $m\angle C$

$5y - 3 = 4y + y$

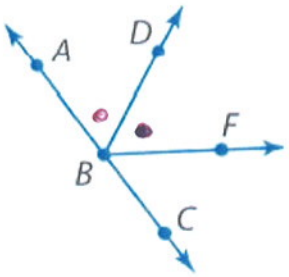
$5y - 4y = 7 + 3$

$y = 10$

$m\angle C = 5(10) - 3 = 47°$

4)Identify complementary angles

In the figure, $\overrightarrow{BA}$ and $\overrightarrow{BC}$ are opposite rays and $\overrightarrow{BD}$ bisects $\angle ABF$.



6. If $m\angle ABF = 3x - 8$ and $m\angle ABD = x + 14$, find $m\angle ABD$.

$m\angle ABF = 2\, m\angle ABD$

$3x - 8 = 2(x + 14)$

$3x - 8 = 2x + 28$

$x = 36$

$m\angle ABD = 36 + 14 = 50^\circ$

7. If $m\angle FBC = 2x + 25$ and $m\angle ABF = 10x - 1$, find $m\angle DBF$.

$2x + 25 + 10x - 1 = 180^\circ$

$12x + 24 = 180 \Rightarrow x = 13$

$m\angle ABF = 10(13) - 1 = 129^\circ$

$\Rightarrow m\angle DBF = 129 \div 2 = 64.5$

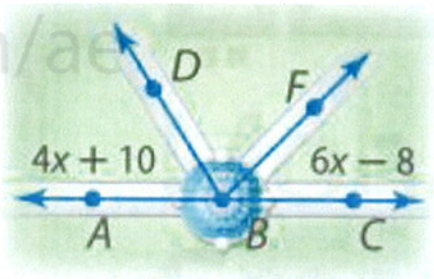
8. A lanscape architect is planning to add sidewalks around a fountain as shown below. If $\overrightarrow{BA}$ and $\overrightarrow{Bc}$ are oppoiste rays and $\overrightarrow{BD}$ bisects $\angle ABF$, find $m\angle FBC$.

$4x + 10 + 4x + 10 + 6x - 8 = 180^\circ$

$14x + 12 = 180^\circ$

$x = 12$

$\Rightarrow m\angle FBC = 6(12) - 8 = 64^\circ$



5)The sum of the measures of the angles of a triangle is 180

Find the measures of the angles of each triangle.

The sum of angles of $\Delta = 180^\circ$

17. The ratio of the measures of the three angles is 3:6:1.

A : B : C

3 : 6 : 1

T 10

$m\angle A = \frac{180}{10} \times 3 = 54^\circ$

$m\angle B = \frac{180}{10} \times 6 = 108$

& $m\angle C = \frac{180}{10} \times 1 = 18^\circ$

18. The ratio of the measures of the three angles is 7:5:8.

A : B : C

7 : 5 : 8

T 20

$m\angle A = \frac{180^\circ}{20} \times 7 = 63^\circ$

$m\angle B = \frac{180}{20} \times 5 = 45^\circ$

$m\angle C = 180^\circ - 63^\circ - 45^\circ = 72^\circ$

19. The ratio of the measures of the three angles is 10:8:6.

A : B : C	T
10 : 8 : 6	24

$* \ 180^\circ \div 24 = 7.5$

$m\angle A = 10 \times 7.5 = 75^\circ$

$m\angle B = 8 \times 7.5 = 60^\circ$

$m\angle C = 6 \times 7.5 = 45^\circ$

20. The ratio of the measures of the three angles is 5:4:7.

6)Solve problems involving the circumference of a circle.

Find the circumference of each circle described. Round the nearest hundreds.

1) Radius = 2.5 cm

$C = 2\pi r$

$= 2\pi(2.5)$

$= 5\pi$

≈ 15.71 Cm

2) diameter= 16 meters.

$C = \pi d$

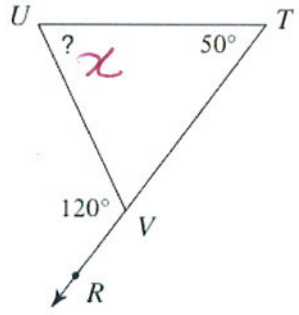
$= \pi(16) = 16\pi$

≈ 50.27 Cm

7)Measure the exterior angle of a triangle

Find the measure of each angle indicated.

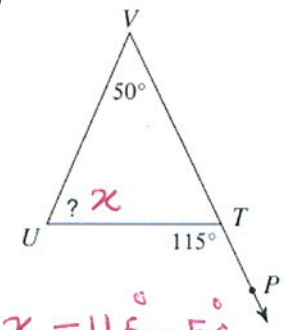
1)



$x = 120 - 50^\circ$

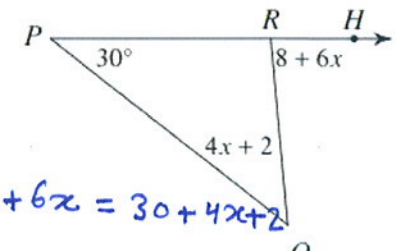
$= 70^\circ$

2)



$x = 115^\circ - 50^\circ$

$= 65^\circ$



$8 + 6x = 30 + 4x + 2$

$6x - 4x = 30 + 2 - 8$

$2x = 24$

$x = 12$

$m\angle HRO = 8 + 6(12) = 80^\circ$

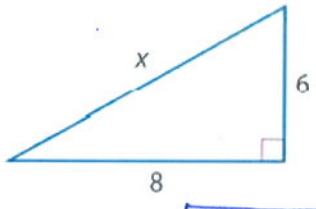
$m\angle O = 80^\circ - 30^\circ$

$= 50^\circ$

8)Use the Pythagorean Theorem

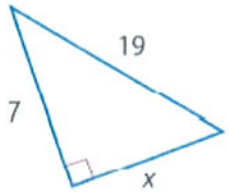
Find x

7.



$x = \sqrt{6^2+8^2} = 10$

8.



$x = \sqrt{19^2-7^2}$

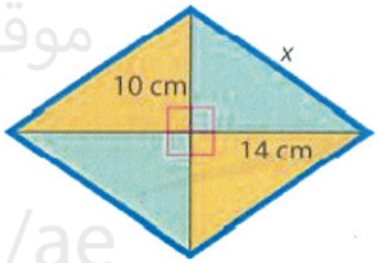
≈ 17.7

9. Eiman is making a banner out of 4 congruent triangles as shown below. How much blue trim will she nee for each side?

$x = \sqrt{10^2+14^2}$

$= 2\sqrt{74}$

≈ 17.2 Cm



9)Solve the proportion

Solve each equation

1) $\frac{3x}{8} = \frac{6}{x}$

$x \cdot 3x = 48$

$3x^2 = 48$

$x^2 = 16$

$x = \mp\sqrt{16} = \mp 4$

2) $\frac{7}{3} = \frac{x-4}{6}$

$3(x-4) = 7(6)$

$3x - 12 = 42$

$3x = 54$

$x = 18$

3) $\frac{x+9}{2} = \frac{3x-1}{8}$

$8x + 72 = 6x - 2$

$2x = 74$

$x = 37$

4) $\frac{3}{2x} = \frac{3x}{8}$

$2x \cdot 3x = 8 \cdot 3$

$6x^2 = 24$

$x^2 = 4$

$x = \mp\sqrt{4} = \mp 2$

10)Simplify radical expressions

Simplify

1) $\sqrt{112} = 4\sqrt{7}$ 2) $\frac{\sqrt{24}}{2\sqrt{3}} = \sqrt{2}$ 3) $\sqrt{15 \cdot 20} = 10\sqrt{3}$

4) $\frac{\sqrt{6}}{\sqrt{3}} \cdot \frac{\sqrt{18}}{\sqrt{3}} = 2\sqrt{3}$ 5) $\sqrt{\frac{45}{80}} = \frac{3}{4}$ 6) $\frac{8\sqrt{2}}{6-3\sqrt{8}} = -\frac{8+4\sqrt{2}}{3}$

PART 2

11)Solve problems involving the circumference of a circle.

Find the diameter and radius of a circle with the given circumference. Round to the nearest hundredth.

24) C=18cm

- $d = \frac{C}{\pi}$
  $= \frac{18}{\pi} \approx 5.73$
- $r = 5.73 \div 2 = 2.865$

25) C = 124 cm

$d = \frac{124}{\pi} = 39.47$

$r = 39.47 \div 2 = 19.735$

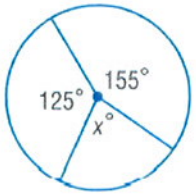
26) C = 375.3 cm

27) C = 2608.25 cm

12)Identify central angles, major arcs, minor arcs, and semicircles, and find their measures.

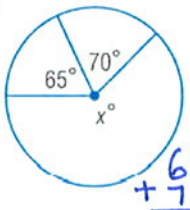
Find the value of x

12.



$x = 360^\circ - 125^\circ - 155^\circ$
$= 80^\circ$

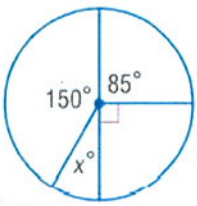
13



$65 + 70 = 135$

$x = 36 - 135^\circ$
$= 225^\circ$

14.

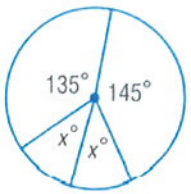


$150 + 85 + 90 = 325$

$360 - 325 = 35^\circ$

$x = 35^\circ$

15.



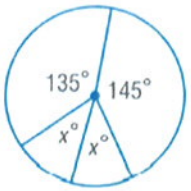
135
+145
280

360
-280
80

$x = 80 \div 2$

$x = 40^\circ$

15.



145
+135
280

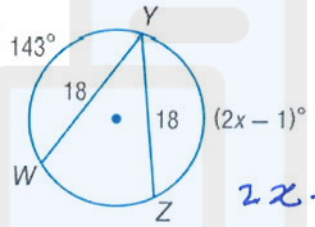
360
-280
80

$x = 80 \div 2 = 40^\circ$

13)Recognize and use relationships between arcs and chords.

Find the value of x

10.

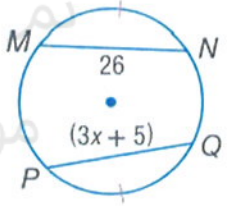


$2x - 1 = 143$

$2x = 144$

$x = 72$

11.



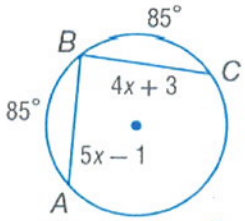
$3x + 5 = 26$

$3x = 26 - 5$

$3x = 21$

$x = 7$

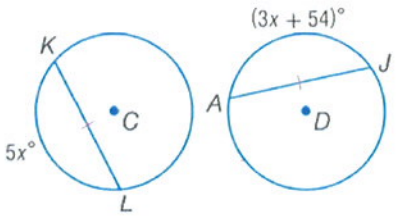
12.



$5x - 1 = 4x + 3$

$x = 4$

13 $\odot C \cong \odot D$

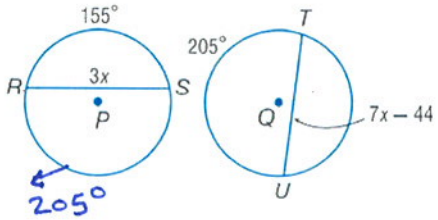


$3x + 54 = 5x$

$\frac{54}{2} = \frac{2x}{2}$

$27 = x$

14. $\odot P \cong \odot Q$



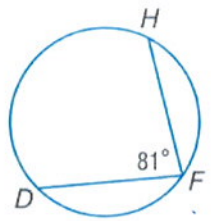
$7x - 4 = 3x$

$4x = 4$

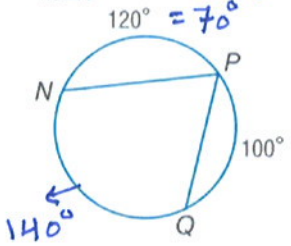
$x = 1$

14)Find measures of inscribed angles

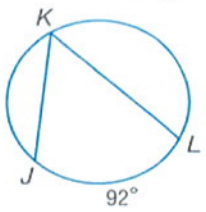
$m\overset{\frown}{DH} = 2 \times 81 = 162^\circ$



$m\angle P = 140 \div 2 = 70^\circ$



$m\angle K = 92 \div 2 = 46^\circ$

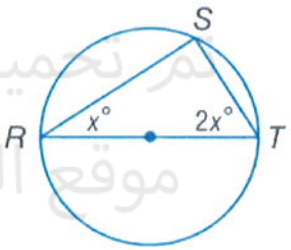


15)Find the measure of polygons enclosed in a circle

Find each value

23) x= 30°

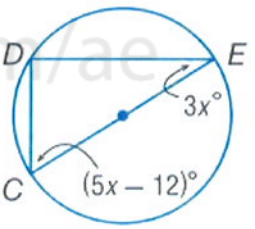
$x + 2x = 90$
$3x = 90$
$x = 30$



24) $m\angle T = 2(30) = 60^\circ$

25) x = 12.75

$5x - 12 + 3x = 90^\circ$
$8x = 90 + 12$
$8x = 102$
$x = 12.75$

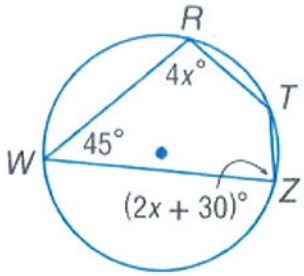


26) $m\angle C = 5(12.75) - 12$
$= 51.75^\circ$

27) $m\angle C = 180^\circ - 45^\circ = 135^\circ$

28) $m\angle Z = 2(25) + 30$
$= 80^\circ$

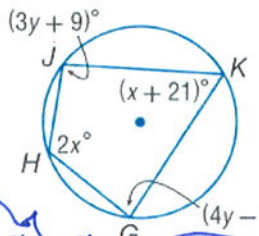
$2x + 30 + 4x = 180^\circ$
$6x = 180 - 30$
$6x = 150^\circ$
$x = 25^\circ$



29) $m\angle H = 2(53) = 106^\circ$

30) $m\angle G = 4(26) - 11$
$= 93^\circ$

$2x + x + 21 = 180^\circ$
$3x = 180 - 21$
$3x = 159$
$x = 53^\circ$

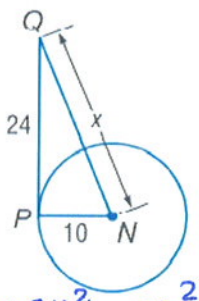


$4y - 11 + 3y + 9 = 180$
$7y = 180 - 9 + 11$
$7y = 182$
$y = 26$

16)Use properties of tangents

Find x. Assume that segments that appear to be tangent are tangent. Round to the nearest tenth if necessary.

17



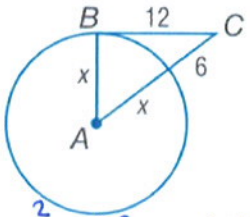
$10^2+24^2=x^2$

$676=x^2$

$x=\sqrt{676}$

$x=26$

19.



$x^2+12^2=(x+6)^2$

$x^2+144=x^2+12x+36$

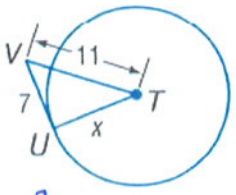
$144=12x+36$

$12x=144-36$

$12x=108$

$x=9$

18.



$x^2+7^2=11^2$

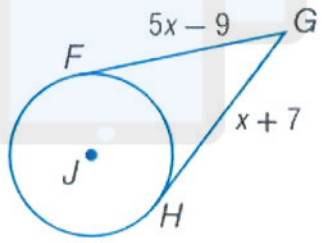
$x^2+49=121$

$x^2=121-49$

$x^2=73$

$x=\sqrt{73}$

21.



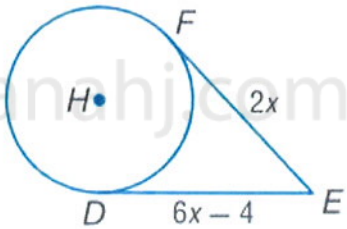
$5x-9=x+7$

$4x=7+9$

$4x=16$

$x=4$

22.



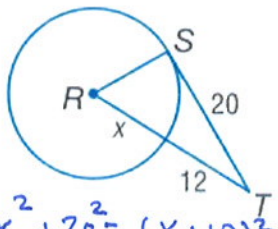
$6x-4=2x$

$6x-2x=4$

$4x=4$

$x=1$

20.



$x^2+20^2=(x+12)^2$

$x^2+400=x^2+24x+144$

$400=24x+144$

$24x=400-144$

$24x=256$

$x\approx 10.7$

17)Write the equation of each circle.

1) center at (9, 0), radius 5

$(x-h)^2+(y-k)^2=r^2$

$(x-9)^2+y^2=25$

2) center at (3, 1), diameter 14

$r=7$

$(x-3)^2+(y-1)^2=7^2$

$(x-3)^2+(y-1)^2=49$

3)center at origin through(2, 2)

$r=\sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$

$=\sqrt{(2-0)^2+(2-0)^2}=\sqrt{8}$

$x^2+y^2=r^2$

$x^2+y^2=8$

4) center at(-5,3),passes through(1, -4)

$r=\sqrt{(-5-1)^2+(3+4)^2}=\sqrt{85}$

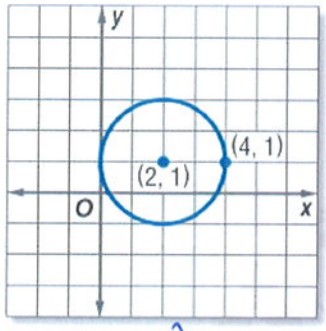
$(x-h)^2+(y-k)^2=r^2$

$(x+5)^2+(y-3)^2=85$

Write the equation of each circle.

$(x-h)^2+(y-K)^2=r^2$

5.

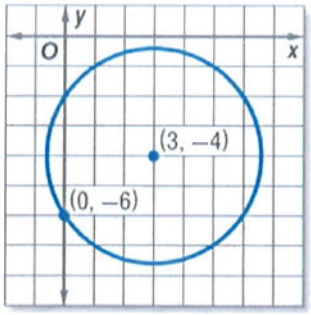


$r=2$

$(x-2)^2+(y-1)^2=2^2$

$(x-2)^2+(y-1)^2=4$

6.



- $r=\sqrt{(3-0)^2+(-4+6)^2}$

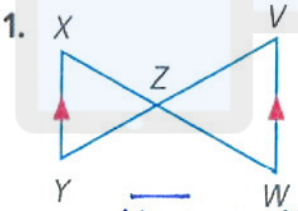
  $r=\sqrt{13}$

- $(x-3)^2+(y+4)^2=13$

18)Use similar triangles to solve problems

Determine whether the triangles are similar. If so, write a similarity statement. Explain your reasoning.

1.

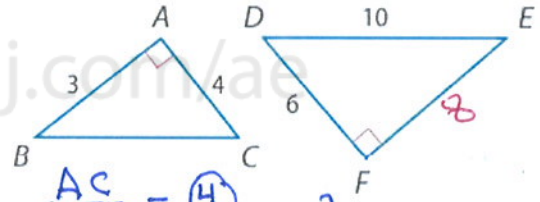


$\overline{VW} \parallel \overline{YX}$

$\Rightarrow \triangle ZVW \sim \triangle ZYX$

$EF=\sqrt{10^2-6^2}=8$

2.



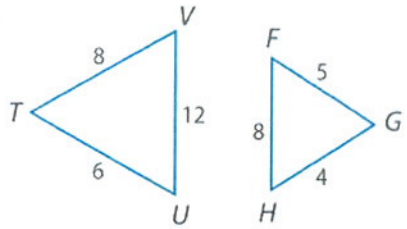
$\frac{AC}{AB}=\frac{4}{3}$

$\frac{FE}{FD}=\frac{8}{6}=\frac{4}{3}$

$\angle F \cong \angle A$

$\triangle ABC \sim \triangle FDE$

3.

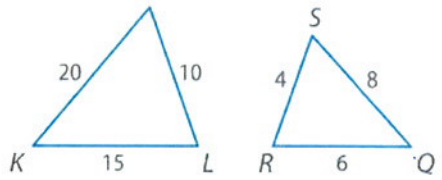


$\frac{GH}{UT}=\frac{4}{6}=\frac{2}{3}$

$\frac{FG}{TV}=\frac{5}{8}$ $\neq$

$\triangle$s are not similar

4.



- $\frac{SR}{JL}=\frac{4}{10}=\frac{2}{5}$

  $\frac{RQ}{KL}=\frac{6}{15}=\frac{2}{5}$

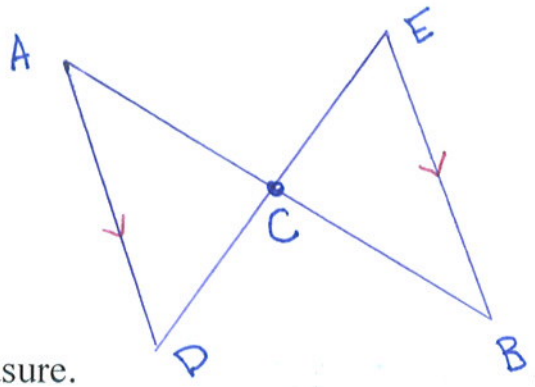
  $\frac{SQ}{JK}=\frac{8}{20}=\frac{2}{5}$

  Two $\triangle$s are similar

$\Rightarrow \triangle SRQ \sim \triangle JLK$

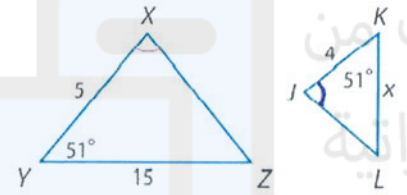
5) In the figure, $\overline{AB}$ intersects $\overline{DE}$ at point C. which additional information would be enough to prove that $\Delta ADC \sim \Delta BEC$?

A) $\angle DAC$ and $\angle ECB$ are congruent.
B) $\overline{AC}$ and $\overline{BC}$ are congruent.
C) $\overline{AD}$ and $\overline{EB}$ are parallel.
D) $\angle CBE$ is a right angle.



Identify the similar triangles. Find each measure.

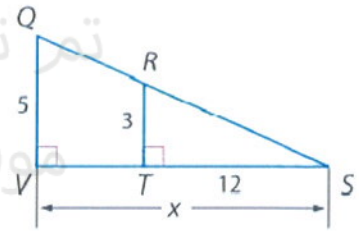
6. *KL*



$\Delta XYZ \sim \Delta JKL$

$\frac{5}{4} = \frac{15}{x} \Rightarrow x = \frac{4(15)}{5} = 12$

7. *VS*



$\Delta STR \sim \Delta SVQ$

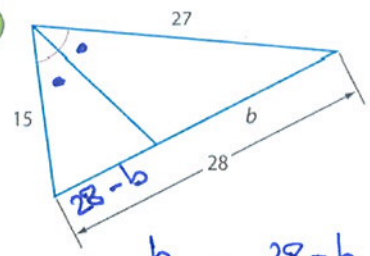
$\frac{12}{x} = \frac{3}{5}$

$x = \frac{5(12)}{3} = 20$

19)Use the Triangle Bisector Theorem.

Find the value of each variable.

11



$\frac{b}{27} = \frac{28-b}{15}$

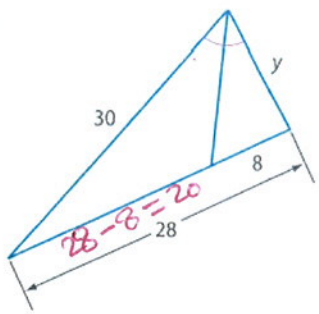
$15b = 756 - 27b$

$15b + 27b = 756$

$42b = 756$

$b = 18$

12.

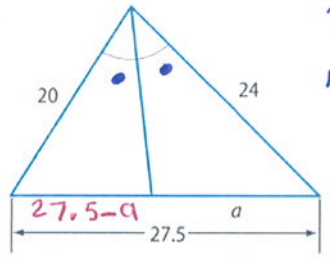


$\frac{8}{y} = \frac{20}{30}$

$\frac{8}{y} = \frac{2}{3}$

$y = \frac{3(8)}{2} = 12$

13.



$\frac{a}{24} = \frac{27.5-a}{20}$

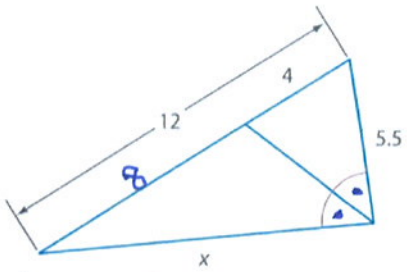
$20a = 660 - 24a$

$44a = 660$

$a = \frac{660}{44}$

$a = 15$

14.



$\frac{4}{5.5} = \frac{8}{x}$

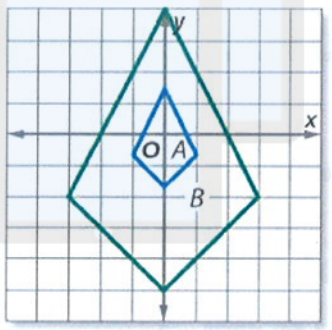
$4x = 44$

$x = 11$

20)Identify similarity transformations

Determine whether the dilation from *A* to *B* is an *enlargement* or a *reduction*. Then find the scale factor of the dilation.

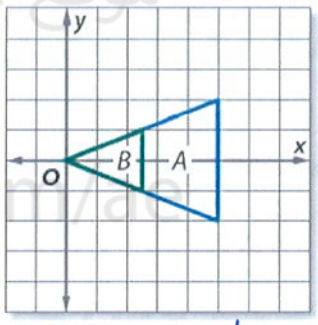
6.



Enlargement

Scale factor $= \frac{9}{3} = 3$

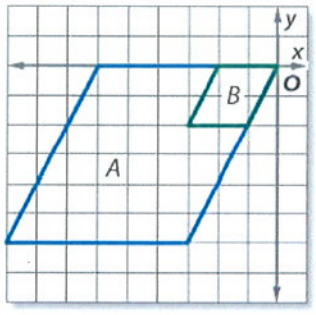
7.



Reduction

Scale factor $= \frac{2}{4} = \frac{1}{2}$

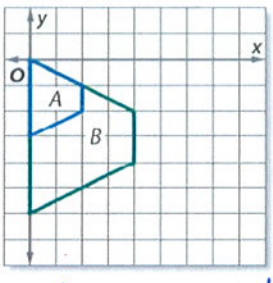
8.



Reduction

Scale factor $= \frac{2}{6} = \frac{1}{3}$

9.



Enlargement

Scale factor $= \frac{6}{3} = 2$

21)Find the geometric mean between two numbers.

Find the geometric mean between two numbers

Find x, y, and z

8) 81 and 4

$GM = \sqrt{81 \times 4} = 18$

9) 25 and 16

$GM = \sqrt{25 \times 16} = 20$

10) 20 and 25

$GM = \sqrt{20 \times 25} = 10\sqrt{5} \approx 22.4$

11) 36 and 24

$GM = \sqrt{36 \times 24} = 12\sqrt{6}$

12) 12 and 2.4

$GM = \sqrt{12 \times 2.4} = \frac{12}{\sqrt{5}} \approx 5.4$

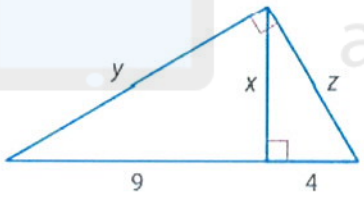
13) 18 and 1.5

$GM = \sqrt{18 \times 1.5} = 3\sqrt{3}$

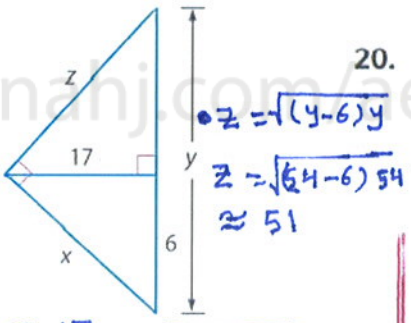
22)Solve problems involving relationships between the parts of a right-angled triangle and the height created by its hypotenuse

19

18.



- $x = \sqrt{4 \times 9} = 6$
- $y = \sqrt{9 \times 13} = 3\sqrt{13}$
- $z = \sqrt{4 \times 13} = 2\sqrt{13}$



- $z = \sqrt{(y-6)y}$

$z = \sqrt{(54-6)54} \approx 51$

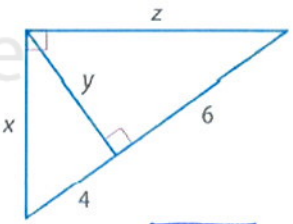
- $17 = \sqrt{6(y-6)}$

$6y - 36 = 289$

$y \approx 54$

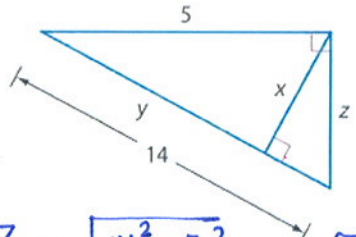
- $x = \sqrt{6y} = \sqrt{6(54)} = 18$

20.



- $y = \sqrt{4 \times 6} = \sqrt{24} \approx 4.9$
- $x = \sqrt{4(10)} = 2\sqrt{10}$
- $z = \sqrt{6(10)} = 2\sqrt{15}$

21.

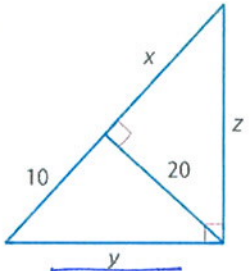


- $Z = \sqrt{14^2 - 5^2} = 3\sqrt{19} \approx 13$
- $5 = \sqrt{y(14)}$

$y \approx 1.8$

- $X = \sqrt{1.8(12.2)} \approx 4.7$

22.



- $20 = \sqrt{10(x)}$

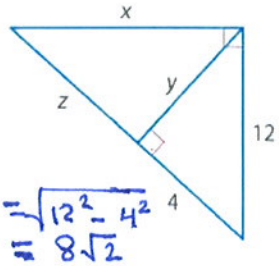
$10x = 400$

$x = 40$

- $y = \sqrt{10(50)} = 10\sqrt{5}$

$z = \sqrt{40(50)} = 20\sqrt{5}$

23.



- $y = \sqrt{12^2 - 4^2} = 8\sqrt{2}$
- $8\sqrt{2} = \sqrt{4z}$

$128 = 4z$

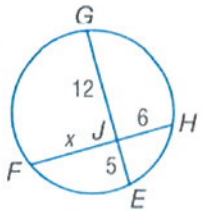
$z = 32$

- $x = \sqrt{32(36)} = 24\sqrt{2}$

PART 3

23)Find measures of segments that intersect in the interior of a circle

6.

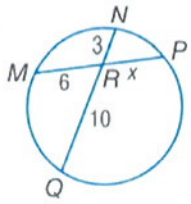


$x(6) = 5(12)$

$6x = 60$

$x = 10$

7.

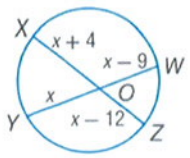


$6x = 3(10)$

$6x = 30$

$x = 5$

8.



$(x+4)(x-2) = x(x-9)$

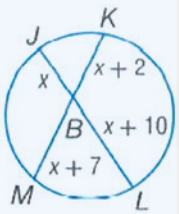
$x^2 + 2x - 8 = x^2 - 9x$

$2x - 8 = -9x$

$11x = 8$

$x = \frac{8}{11}$

9.



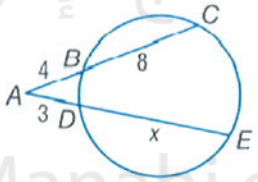
$(x+7)(x+2) = x(x+10)$

$x^2 + 9x + 14 = x^2 + 10x$

$9x + 14 = 10x$

$14 = x$

10.



$4(4+8) = 3(3+x)$

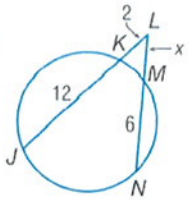
$4(12) = 9 + 3x$

$48 - 9 = 3x$

$39 = 3x$

$13 = x$

11.



24)Write and solve proportions

29) According to a recent study, 7 out every 500 people aged 13 to 17 years are vegetarian. In a group of 350 13- to 17- year- old's, about how many would you expect to be vegetarian?

$$\frac{7}{500} = \frac{x}{350}$$

$$x = \frac{7(350)}{500} = 4.9 \approx 5$$

30) your family is traveling to Mexico on vacation. You have saved AED500 to use for spending money. If 269 Mexican pesos is equivalent to AED91.80, how many pesos will you get when you exchange your AED 500?

$$x = \frac{500(269)}{91.80} \approx 1465 \text{ pesos}$$

AED	pesos
91.80	269
500	x

Solve each proportion. Round to the nearest tenth.

31) $\frac{2x+3}{3} = \frac{6}{x-1}$

$(2x+3)(x-1) = 18$

$2x^2 + x - 3 - 18 = 0$

$2x^2 + x - 21 = 0$

$x = -\frac{7}{2}$, $x = 3$

→ mode [5] [3] استخدم لحل المعادلة التربيعية

32) $\frac{x^2+4x+4}{40} = \frac{x+2}{10}$

$10x^2 + 40x + 40 = 40x + 80$

$10x^2 + 40 - 80 = 0$

$10x^2 - 40 = 0$

$x^2 = 4$

$x = \mp\sqrt{4} = \mp 2$

33) $\frac{9x+6}{18} = \frac{20x+4}{3x}$

$27x^2 + 18x = 360x + 72$

$27x^2 + 18x - 360x - 72 = 0$

$27x^2 - 342x - 72 = 0$

$3x^2 - 38x - 8 = 0$

mode [5] [3] استخدم

$x \approx -0.2$, $x \approx 12.9$

34) the perimeter of a rectangle is 98 feet. The ratios of its width is 5:2. Find the area of the rectangle.

its length to width is 5:2

L : W

5 : 2 T 7

$L + W = 98 \div 2 = 49$

- $L = \frac{49}{7} \times 5 = 35$
- $W = \frac{49}{7} \times 2 = 14$ or $W = 49 - 35 = 14$

Area $= 35 \times 14$

$= 490\ ft^2$

35) the perimeter of a rectangle is 220 inches. The ratios of its length to its width is 7: 3. Find the area of the rectangle.

$P = 220$

$\frac{1}{2}P = 110 \Rightarrow L + W = 110$

$\Rightarrow \frac{110}{10} = 11$

$\therefore L = 7 \times 11 = 77$, $W = 3 \times 11 = 33$

L : W T

7 : 3 10

Area $= 77 \times 33$

$= 2541\ in^2$

36) the ratio of the measure of the side lengths of a quadrilateral is 2:3:5:4. Its perimeter is 154 meters. Find the length of the shortest side.

37) the ratio of the measures of the angles of a quadrilateral is 2:4:6:3. Find the measures of the angles of the quadrilateral.

A : B : C : D | T
2 : 4 : 6 : 3 | 15

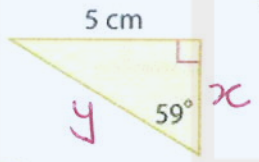
* $\frac{360^\circ}{15} = 24^\circ$

$m\angle A = 2(24) = 48^\circ$
$m\angle B = 4(24) = 96^\circ$
$m\angle C = 6(24) = 144^\circ$
$m\angle D = 3(24) = 72^\circ$

25) Use trigonometric ratios to find angle measures in right triangles

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

51.



$\tan 59^\circ = \frac{5}{x}$

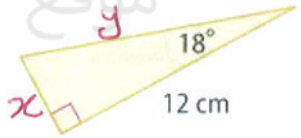
$x \approx 3$

$y = \sqrt{3^2+5^2} \approx 5.8$

$P = 5+3+5.8 = 13.8$

$A = \frac{5\times 3}{2} = 7.5\ Cm^2$

52.



$\tan 18^\circ = \frac{x}{12}$

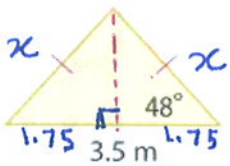
$x = 3.22$

$y = \sqrt{3.22^2+12^2} \approx 12.42$

$P = 12+3.22+12.42 = 27.64\ Cm$

$A = \frac{3.22\times 12}{2} = 19.32\ Cm^2$

53.



- $\cos 48^\circ = \frac{1.75}{x}$

$x = 2.6\ m$

$\tan 48^\circ = \frac{y}{1.75}$

$y \approx 1.9$

- $P = 2.6+2.6+3.5 = 8.7\ m$
- $A = \frac{3.5\times 1.9}{2} = 3.325\ m^2$

اعداد
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