

Corrective Assignment 11

CA Unit 11

Find the measure of the arc or angle indicated.

1)
 $? = 89(2)$
 $? = 178^\circ$

2)
 156°
 $\frac{156}{2} = 78^\circ$

Find the length of the segment indicated. Round your answer to the nearest tenth if necessary.

3)
 $x = 9$

4)
 $x^2 + 7.7^2 = 20.6^2$
 $x^2 = 365.09$
 $x = 19.1$

Solve for x.

5)
 $9x + 1 + 16x + 4 = 180$
 $25x + 5 = 180$
 $25x = 175$
 $x = 7$

6)
 $10x + 6 = 116$
 $x = 10^\circ$

Solve for x. Assume that lines which appear tangent are tangent.

7)
 $10 + 10x = 70$
 $x = 6$

8)
 $7x - 4 = \frac{1}{2}(165 - 75)$
 $7x - 4 = 45$
 $x = 7$

9)
 $4x - 5 = \frac{1}{2}(119 - (6x + 3))$
 $4x - 5 = \frac{1}{2}(119 - 6x - 3)$
 $4x - 5 = 58 - 3x$
 $7x = 63$
 $x = 9$

10)
 $18(x + 18) = 30^2$
 $18x = 576$
 $x = 32$

11)
 $8(x + 8) = 9(16)$
 $8x + 64 = 144$
 $8x = 80$
 $x = 10$

12)
 $5x + 10 = \frac{1}{2}(235 - 125)$
 $5x + 10 = 55$
 $x = 9$

Find the measure of the line segment indicated. Assume that lines which appear tangent are tangent.

13) Find JE
 $4(x + 4) = 40$
 $4x = 24$
 $x = 6$
 $JE = 10$

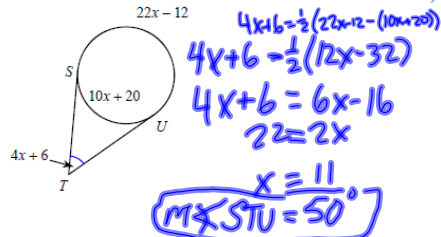
14) Find EF
 $8(27) = 9(2x + 7)$
 $216 = 9(2x + 7)$
 $24 = 2x + 7$
 $x = 11$
 $EF = 15$

15) Find DM
 $12(7) = (x + 7)$
 $84 = 6x + 42$
 $x = 7$
 $DM = 14$

16) Find $m\widehat{ST}$
 $8x + 7 = \frac{1}{2}(81 + 9)$
 $8x + 7 = \frac{1}{2}(9x + 81)$
 $8x + 7 = 4.5x + 40.5$
 $3.5x = 33.5$
 $x = 10$
 $m\widehat{ST} = 93$

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17) Find $m\angle STU$



Solve each inequality and graph its solution.

19) $8 + 4x > 4(2 - 3x)$

Handwritten work:
 $8 + 4x > 8 - 12x$
 $16x > 0$
 $x > 0$

Factor each completely.

21) $10k^2 + 26k - 12$

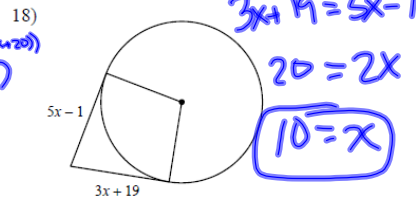
Handwritten work:
 $2(5k^2 + 13k - 6)$
 $2(k+3)(5k-2)$

Solve each system by substitution.

23) $y = 4x - 4$
 $4x + 2y = -20$

Handwritten work:
 $4x + 2(4x - 4) = -20$
 $12x - 8 = -20$
 $12x = -12$
 $x = -1$
 $y = -8$

Solve for x . Assume that lines which appear to be tangent are tangent.



Solve each equation.

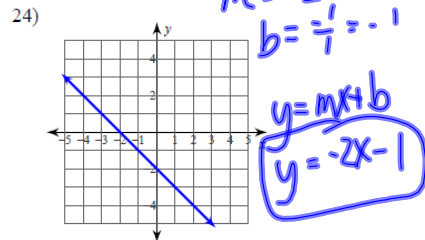
20) $2p + 2 = 2(1 + 4p) - 4p$

Handwritten work:
 $2p + 2 = 2 + 8p - 4p$
 $0 = 2p$
 $0 = p$

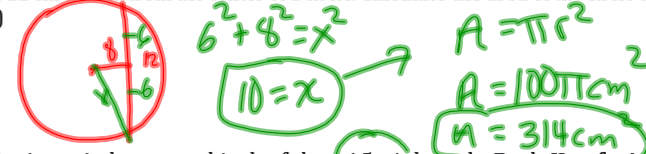
22) $n^2 - 1$

Handwritten work:
 $(n-1)(n+1)$

Write the slope-intercept form of the equation of each line.



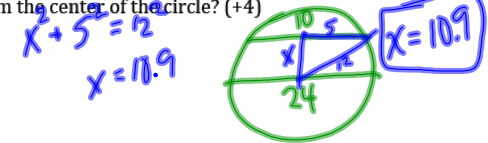
1. A chord of 12 cm is 8 cm from the center of a circle. Calculate the area of the circle to the nearest tenth. (+4)



2. Sully is riding in an airplane at an altitude of about 4.5 mi above the Earth. How far is Sully from the furthest point on the Earth that he can see? Remember, the Earth's diameter is approximately 7920 miles. (+4)

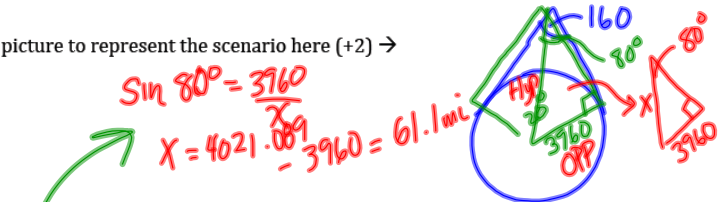


3. The diameter of a circle is 24 cm and a chord that is parallel to that diameter is 10 cm. To the nearest tenth, what is the distance to the chord from the center of the circle? (+4)



4. Brust is hovering up in a UFO. He estimates the viewing angle of the Earth formed by two tangents to be 160° .

a. Draw a picture to represent the scenario here (+2) →



b. Find the measure of the arc of Earth's surface viewable from the UFO. (+3)

Handwritten work:
 $m \text{ arc} = 20^\circ$
 $= 40^\circ$

c. If the radius of the Earth is about 3960 miles, calculate the distance from the earth's surface to the UFO to the nearest mile. (+3)

Handwritten work:
 61.1 mi