HM3 Final Extra Practice Problems

Name_____

Solve each system by elimination.

1) $3x - 3y = 9$
$-6x + 10y = -18$

(3, 0)

Solve each system by substitution.

2) $6x + y = -12$
$2x + 3y = -20$

(-1, -6)

Solve each system by elimination.

3) $-3x + y - z = -8$
$-5x + 5y - 3z = -28$
$-5x - 4y + z = 12$

(1, -4, 1)

4) $a - 6b + 3c = 28$
$5a + b + 3c = -8$
$4a - 3b - 4c = -4$

(-2, -4, 2)

State the possible rational roots for each equation.

5) $3x^4 + 7x^3 - 7x^2 - 3x + 1$

typo

$\pm 1, 3, \frac{1}{3}$

State the possible number of positive and negative roots for each equation.

6) $3x^4 - x^3 - 3x^2 + x = 0$

+R: 2 or 0
-R: 1

Solve each system of equations.

7) $4y^2 + 2x - 2y + 4 = 0$
$x - y = -2$

(-2, 0)

Solve each equation. Remember to check for extraneous solutions.

8) $p = 5 + \sqrt{3p - 5}$

10

9) $\sqrt{x - 2} + 9 = 11$

6

Solve each equation for $0 \le \theta < 2\pi$.

10) $-2 + \sin\theta = \frac{-4 - \sqrt{3}}{2}$

$\frac{4\pi}{3}, \frac{5\pi}{3}$

11) $1 + \cot\theta = 2$

$\frac{\pi}{4}, \frac{5\pi}{4}$

Honors Math 3

Name key

Final Review Assignment 2

Find the term named in the problem.

1) 4, 14, 24, 34, ...
Find a_{25}

$a_{25} = 244$

2) −4, −8, −16, −32, ...
Find a_9

$a_9 = -1024$

3) $a_{16} = -113$ and $a_{39} = -320$ Arithmetic
Find a_{31}

$a_{31} = -248$

4) $a_2 = 4$ and $a_3 = 16$ Geometric
Find a_{10}

$a_{10} = 262{,}144$

Evaluate each series described.

5) $4 + 8 + 12 + 16..., \; n = 16$ 544

6) $2 + 4 + 8 + 16..., \; n = 9$ 1022

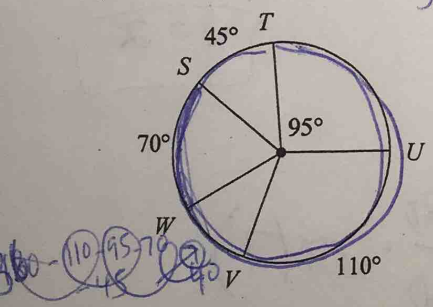
Evaluate each infinite geometric series described.

7) $1 + \frac{1}{3} + \frac{1}{9} + \frac{1}{27} ...$ $\frac{3}{2}$

8) $64 + 16 + 4 + 1...$ $\frac{256}{3}$

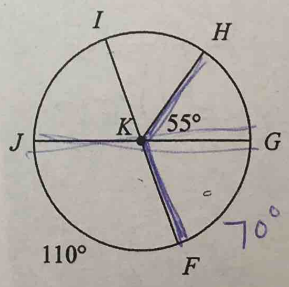
Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.

9) $m\overset{\frown}{TVS}$ 360 − 45



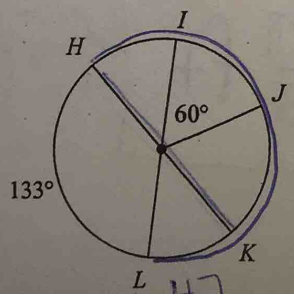
315°

10) $m\angle HKF$ 55 + 70



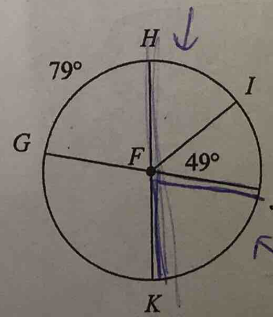
125°

11) $m\overset{\frown}{HJL}$ 180 + 47



227°

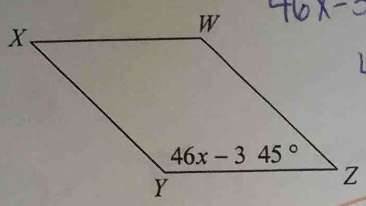
12) $m\angle JFK$ 180 − 49 − 79 = 52



180 − 49 − 52 = 79°

Solve for x. Each figure is a parallelogram.

13)



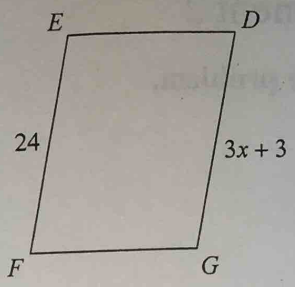
$46x-3+45=180$

$46x+42=180$

$46x=138$

$x=3$

14)

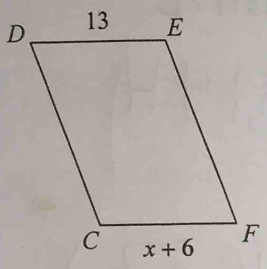


$24=3x+3$

$21=3x$

$x=7$

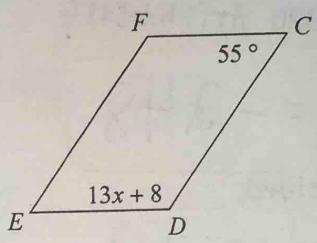
15)



$13=x+6$

$7=x$

16)



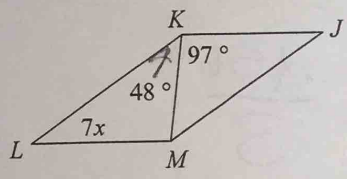
$55+13x+8=180$

$63+13x=180$

$13x=117$

$x=9$

17)



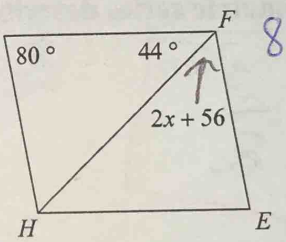
$7x+48+97=180$

$7x+145=180$

$7x=35$

$x=5$

18)



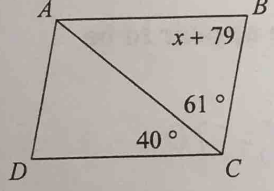
$80+44+2x+56=180$

$180+2x=180$

$2x=0$

$x=0$

19)

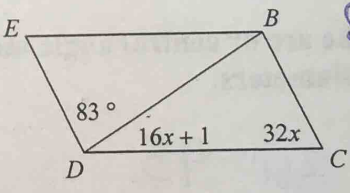


$x+79+40+61=180$

$x+180=180$

$x=0$

20)



$83+16x+1+32x=180$

$48x+84=180$

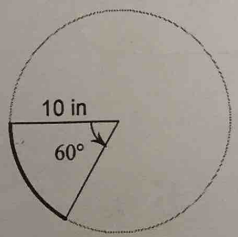
$48x=96$

$x=2$

Find the length of each arc.

$C=2\pi r$

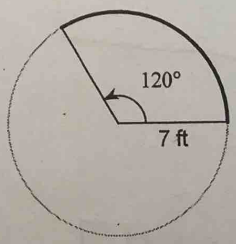
21)



$\frac{60}{360}\cdot 2\pi(10)$

$\frac{10\pi}{3}$ in

22)



$\frac{120}{360}\cdot 2\pi(7)$

$\frac{14\pi}{3}$ ft