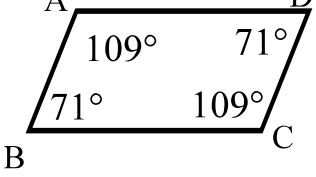
Parallelograms
Geometry

KEY

Find the measure of each angle.

1)



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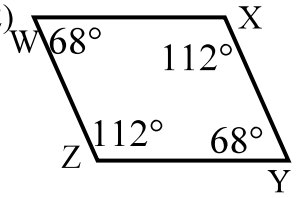

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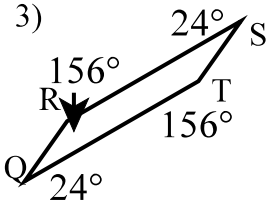

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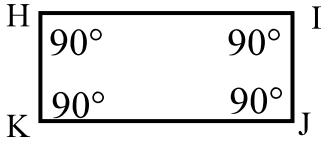

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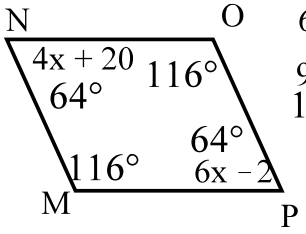

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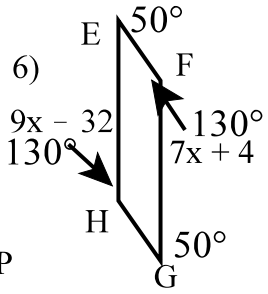

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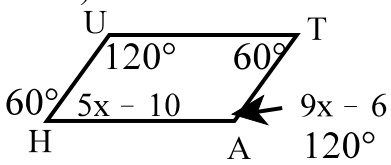
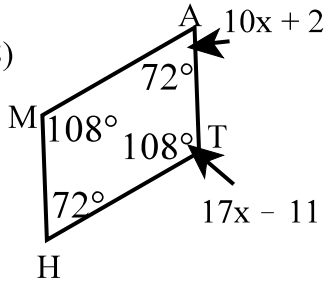


8)



$4x + 20 = 6x - 2$
$-4x \quad -4x$
$20 = 2x - 2$
$+2 \quad +2$
$\frac{22}{2} = \frac{2x}{2}$
$11 = x$

$9x - 32 = 7x + 4$
$-7x \quad -7x$
$2x - 32 = 4$
$+32 \quad +32$
$\frac{2x}{2} = \frac{36}{2}$
$x = 18$

$5x - 10 + 9x - 6 = 180$
$14x - 16 = 180$
$+16 \quad +16$
$\frac{14x}{14} = \frac{196}{14}$
$x = 14$

$10x + 2 + 17x - 11 = 180$
$27x - 9 = 180$
$+9 \quad +9$
$\frac{27x}{27} = \frac{189}{27}$
$x = 7$

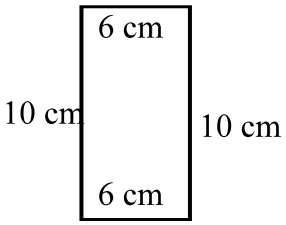
Find the perimeter of each parallelogram.

9) P = 32 cm

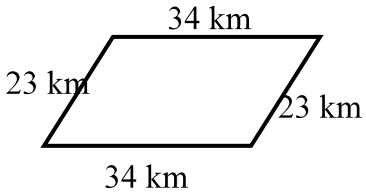
10) P = 114 km

11) P = 79.8 m

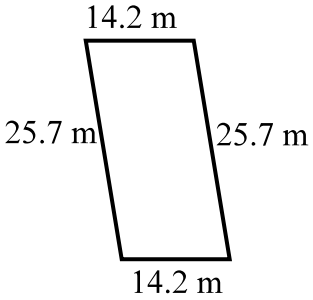
12) P = 51 1/5 in Or 256/5 in



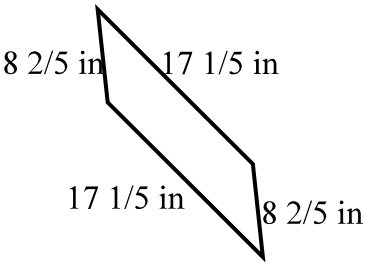
6 cm
+6 cm
+10 cm
+10 cm
32 cm



34 km
+34 km
+23 km
+23 km
114 km



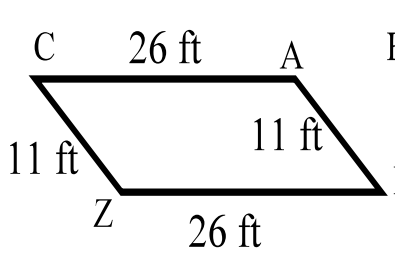
14.2 m
+14.2 m
+25.7 m
+25.7 m
79.8 m



17 1/5 in
+17 1/5 in
+8 2/5 in
+8 2/ 5 in
51 1/5 in

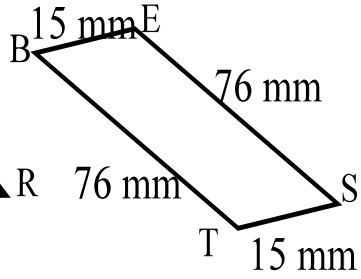
Find the length of the sides of each parallelogram.

13) P= 74 ft



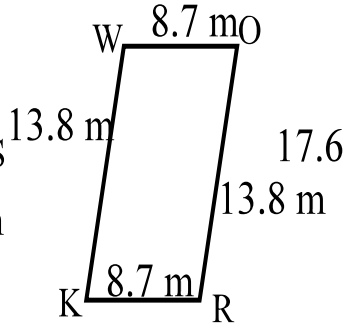
11 ft + x = 37 ft
-11ft -11ft
x = 26 ft
Note: 37 is 74/2

14) P= 182 mm



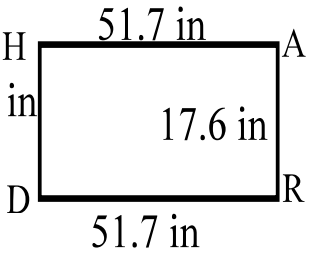
76 mm + x = 91 mm
-76mm -76mm
x = 15 mm
Note: 91 is 182/2

15) P= 45 m



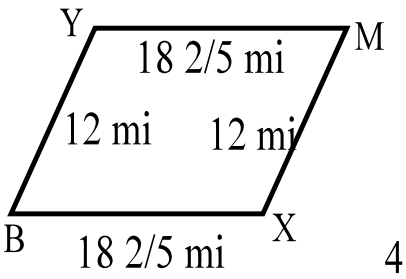
8.7 m + x = 22.5 m
-8.7m -8.7m
x = 13.8 m
Note: 22.5 is 45/2

16) P= 138.6 in

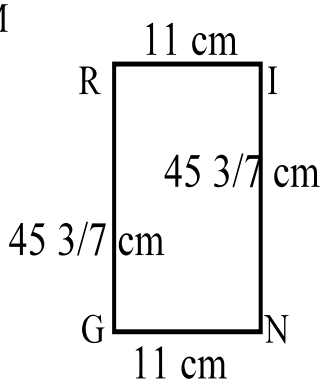


51.7 in + x = 69.3 in
-51.7in -51.7in
x = 17.6 in
Note: 69.3 is 138.6/**2**

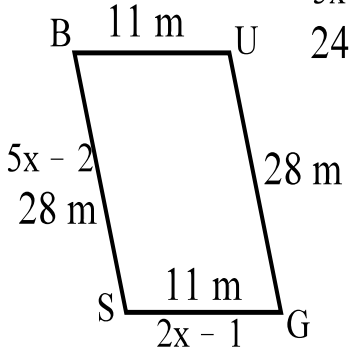
17) P= 60 4/5 mi



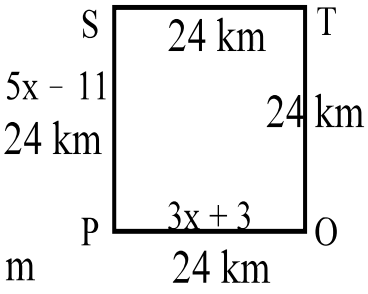
18) P= 112 6/7 cm



19) P= 78 m



20) P= 96 km



2(2x - 1) + 2(5x - 2) = 78
4x - 2 + 10x - 4 = 78
14x - 6 = 78
+6 +6
14x = 84
14 14
x = 6

2(3x + 3) + 2(5x - 11) = 96
6x + 6 + 10x - 22 = 96
16x - 16 = 96
+16 +16
16x = 112
16 16
x = 7