Geometry Homework #5 – Answer Key

1) $x=17, p=16, c=3$ $58º, 122º$

2) $x=8\sqrt{2}$

3) $x=-26$ $71º, 109º$

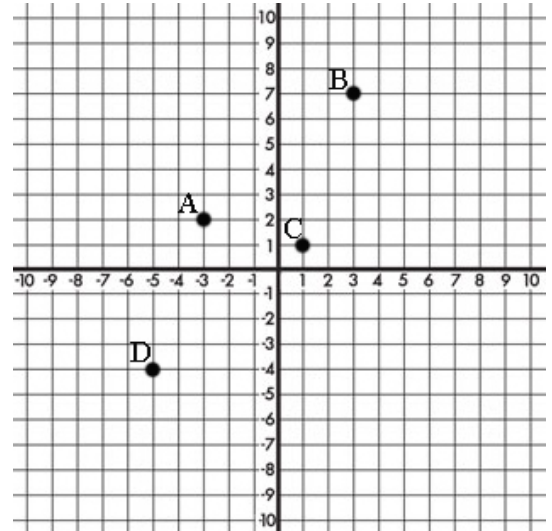4) AB: Midpoint $=(0,\frac{9}{2})$, Distance $= \sqrt{61}$, Slope $= \frac{5}{6}$

   BC: Midpoint $=(2,4)$, Distance $= 2\sqrt{10}$, Slope $= \frac{3}{1}$

   CD: Midpoint $=(-2,\frac{-3}{2})$, Distance $= \sqrt{61}$, Slope $= \frac{5}{6}$

   DA: Midpoint $=(-4,-1)$, Distance $= 2\sqrt{10}$, Slope $= \frac{3}{1}$

   ABCD is a parallelogram

5) $120\sqrt{13}$ feet

6) Sum of interior = 540 degrees, Sum of exterior = 360 degrees, One interior = 108 degrees, One exterior = 72 degrees

7) Apothem $= \sqrt{65}$, Area $= 28\sqrt{65}$, Inscribed $= 65\pi$, Circumscribed $= 81\pi$

8) Sum of interior = 1,080 degrees, Sum of exterior = 360 degrees, One interior = 135 degrees, One exterior = 45 degrees

9) Radius = 32, Side $=32\sqrt{3}$, Area $= 768\sqrt{3}$, Inscribed $= 256\pi$, Circumscribed $= 1,024\pi$

10) Radius = 13, Area = 480, Inscribed $= 144\pi$, Circumscribed $= 169\pi$

11) Radius = 18, Apothem $=9\sqrt{3}$, Area $= 486\sqrt{3}$, Inscribed $= 243\pi$, Circumscribed $= 324\pi$

12) Side $=2\sqrt{235}$, Area $=105\sqrt{235}$, Inscribed $= 441\pi$, Circumscribed $= 676\pi$

13) Radius $= 12\sqrt{2}$, Side = 24, Area = 576, Inscribed $= 144\pi$, Circumscribed $= 288\pi$

14) Radius = 18, Apothem $=9$, Area $= 243\sqrt{3}$, Inscribed $= 81\pi$, Circumscribed $= 324\pi$

15) Apothem = 35, Area = 4,200, Inscribed $= 1,225\pi$, Circumscribed $= 1,396\pi$

16) Radius $= \frac{28\sqrt{3}}{3}$, Side $=\frac{28\sqrt{3}}{3}$, Area $= 392\sqrt{3}$, Inscribed $= 196\pi$, Circumscribed $= \frac{784\pi}{3}$

17) Sum of interior = 1,440 degrees, Sum of exterior = 360 degrees, One interior = 144 degrees, One exterior = 36 degrees

18) Side $=40$, Area $=3,780$, Inscribed $= 441\pi$, Circumscribed $= 841\pi$

19) Apothem = 8, Side = 16, Area = 256, Inscribed $= 64\pi$, Circumscribed $= 128\pi$

20) Radius $= 10$, Apothem $=5\sqrt{3}$, Area $= 150\sqrt{3}$, Inscribed $= 75\pi$, Circumscribed $= 100\pi$