

Area and Perimeter of Composite Shapes (A)

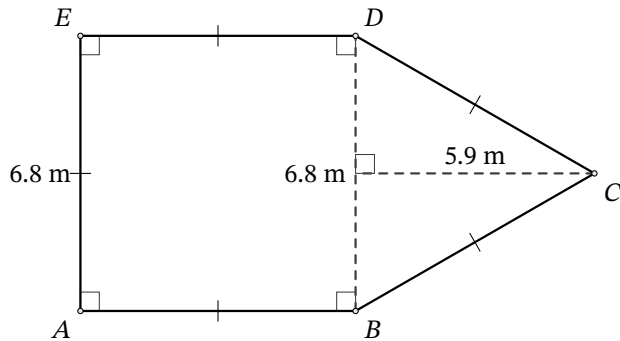
Name: _____

Date: _____

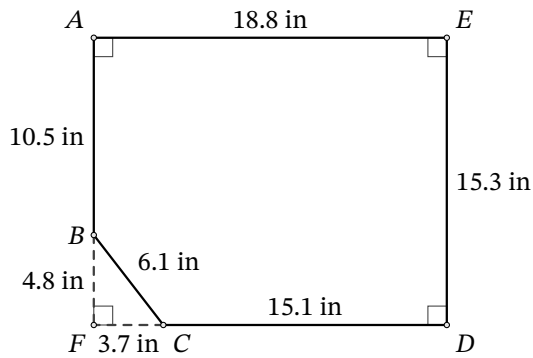
Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

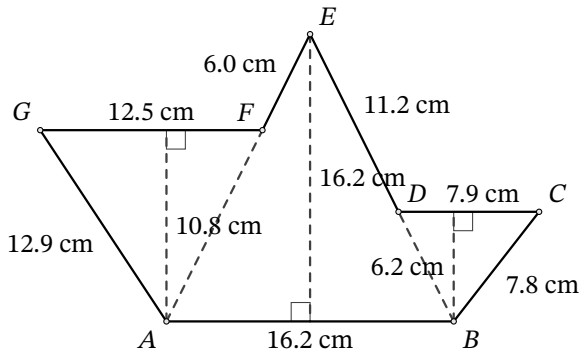
1.



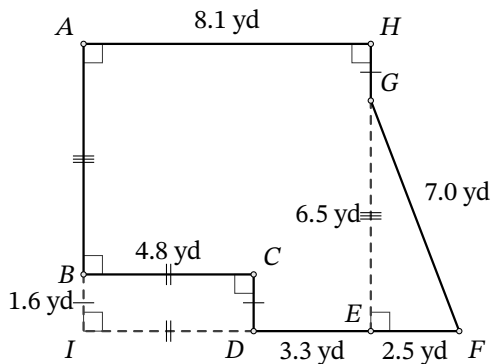
2.



3.



4.



Area and Perimeter of Composite Shapes (A) Answers

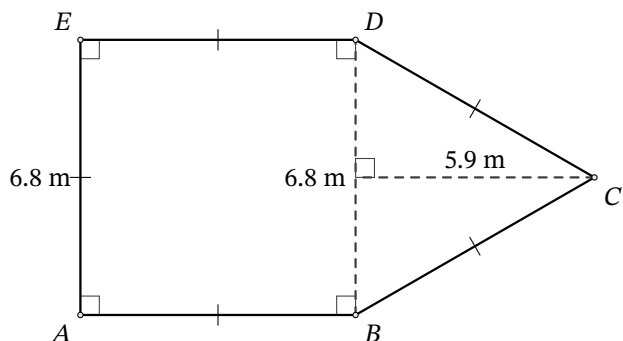
Name: _____

Date: _____

Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

1.



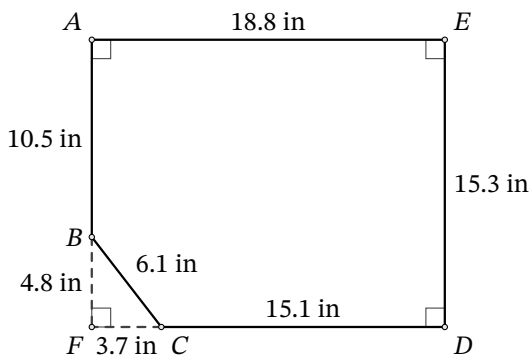
Area

$$\begin{aligned} & (\text{Area of } ABDE) + (\text{Area of } BCD) \\ &= (6.8^2) + \left(\frac{6.8 \times 5.9}{2}\right) \\ &= 46.24 + 20.06 \\ &= 66.3 \text{ m}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EA \\ &= 6.8 + 6.8 + 6.8 + 6.8 + 6.8 \\ &= 34.0 \text{ m} \end{aligned}$$

2.



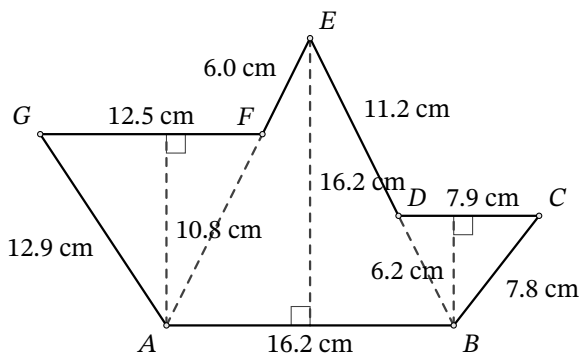
Area

$$\begin{aligned} & (\text{Area of } AFDE) - (\text{Area of } BFC) \\ &= (15.3 \times 18.8) - \left(\frac{4.8 \times 3.7}{2}\right) \\ &= 287.64 - 8.88 \\ &= 278.8 \text{ in}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EA \\ &= 10.5 + 6.1 + 15.1 + 15.3 + 18.8 \\ &= 65.8 \text{ in} \end{aligned}$$

3.



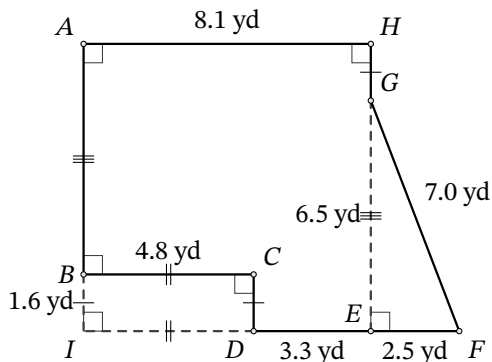
Area

$$\begin{aligned} & (\text{Area of } AFG) + (\text{Area of } ABE) + (\text{Area of } BCD) \\ &= \left(\frac{12.5 \times 10.8}{2}\right) + \left(\frac{16.2 \times 16.2}{2}\right) + \left(\frac{7.9 \times 6.2}{2}\right) \\ &= 67.5 + 131.22 + 24.49 \\ &= 223.2 \text{ cm}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GA \\ &= 16.2 + 7.8 + 7.9 + 11.2 + 6.0 + 12.5 + 12.9 \\ &= 74.5 \text{ cm} \end{aligned}$$

4.



Area

$$\begin{aligned} & (\text{Area of } AIEH) - (\text{Area of } BIDC) + (\text{Area of } EFG) \\ &= (8.1^2) - (1.6 \times 4.8) + \left(\frac{2.5 \times 6.5}{2}\right) \\ &= 65.61 - 7.68 + 8.125 \\ &= 66.1 \text{ yd}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DF + FG + GH + HA \\ &= 6.5 + 4.8 + 1.6 + 5.8 + 7.0 + 1.6 + 8.1 \\ &= 35.4 \text{ yd} \end{aligned}$$

Area and Perimeter of Composite Shapes (B)

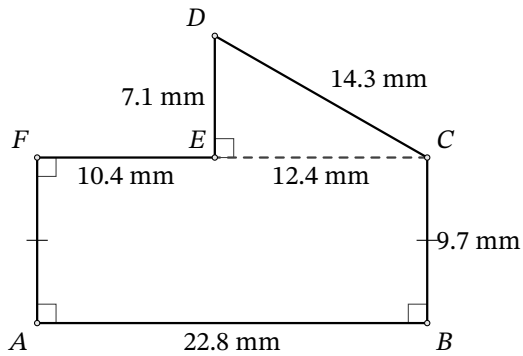
Name: _____

Date: _____

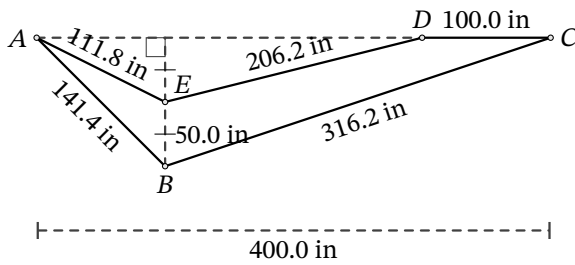
Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

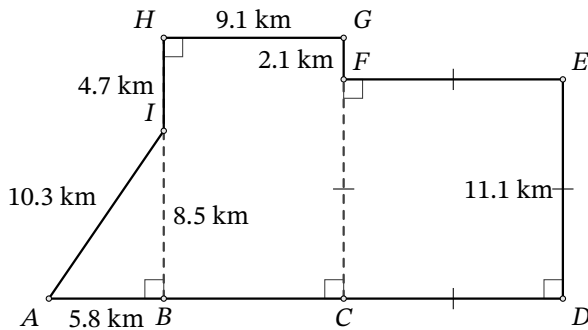
1.



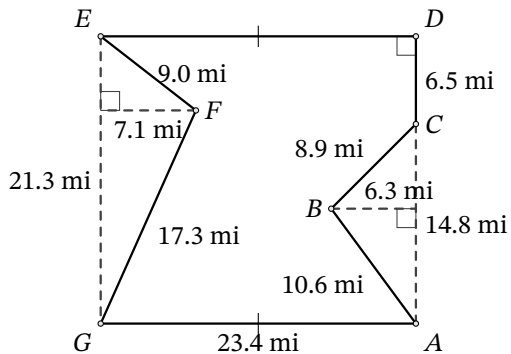
2.



3.



4.



Area and Perimeter of Composite Shapes (B) Answers

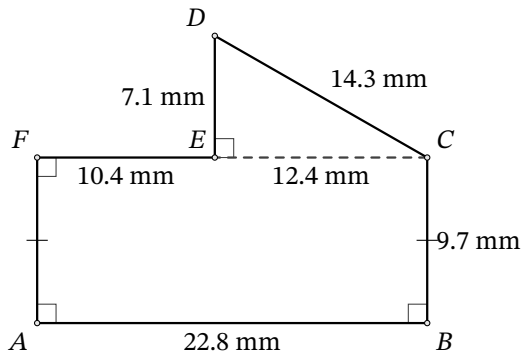
Name: _____

Date: _____

Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

1.



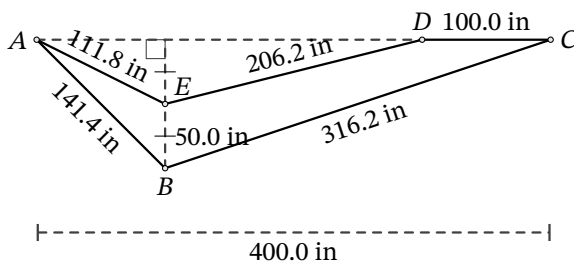
Area

$$\begin{aligned} & (\text{Area of } ABCF) + (\text{Area of } CDE) \\ &= (9.7 \times 22.8) + \left(\frac{12.4 \times 7.1}{2}\right) \\ &= 221.16 + 44.02 \\ &= 265.2 \text{ mm}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FA \\ &= 22.8 + 9.7 + 14.3 + 7.1 + 10.4 + 9.7 \\ &= 74.0 \text{ mm} \end{aligned}$$

2.



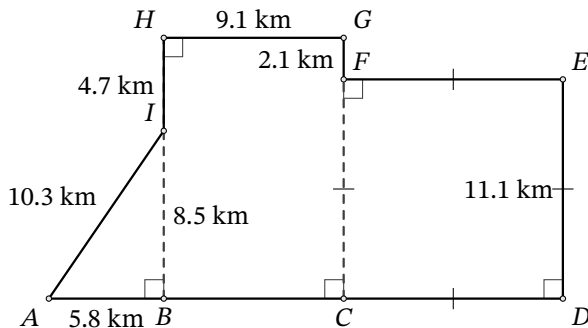
Area

$$\begin{aligned} & (\text{Area of } ABC) - (\text{Area of } AED) \\ &= \left(\frac{400.0 \times 100.0}{2}\right) - \left(\frac{300.0 \times 50.0}{2}\right) \\ &= 20,000.0 - 7,500.0 \\ &= 12,500.0 \text{ in}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EA \\ &= 141.4 + 316.2 + 100.0 + 206.2 + 111.8 \\ &= 875.6 \text{ in} \end{aligned}$$

3.



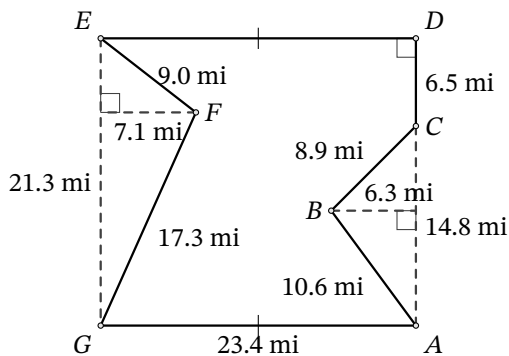
Area

$$\begin{aligned} & (\text{Area of } ABI) + (\text{Area of } BCGH) + (\text{Area of } CDEF) \\ &= \left(\frac{5.8 \times 8.5}{2}\right) + (13.2 \times 9.1) + (11.1^2) \\ &= 24.65 + 120.12 + 123.21 \\ &= 268.0 \text{ km}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AD + DE + EF + FG + GH + HI + IA \\ &= 26.0 + 11.1 + 11.1 + 2.1 + 9.1 + 4.7 + 10.3 \\ &= 74.4 \text{ km} \end{aligned}$$

4.



Area

$$\begin{aligned} & (\text{Area of } ADEG) - (\text{Area of } EGF) - (\text{Area of } ACB) \\ &= (21.3 \times 23.4) - \left(\frac{21.3 \times 7.1}{2}\right) - \left(\frac{14.8 \times 6.3}{2}\right) \\ &= 498.42 - 75.615 - 46.62 \\ &= 376.2 \text{ mi}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GA \\ &= 10.6 + 8.9 + 6.5 + 23.4 + 9.0 + 17.3 + 23.4 \\ &= 99.1 \text{ mi} \end{aligned}$$

Area and Perimeter of Composite Shapes (C)

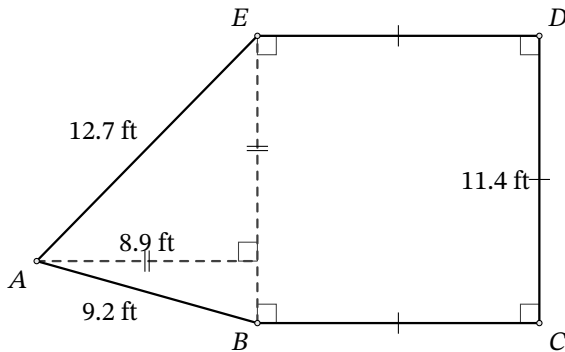
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Date: _____

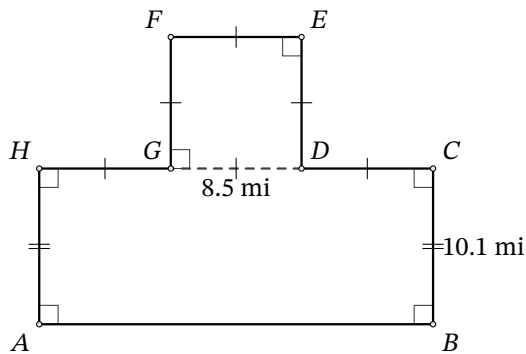
Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

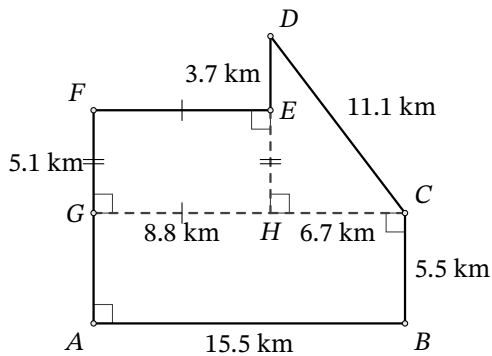
1.



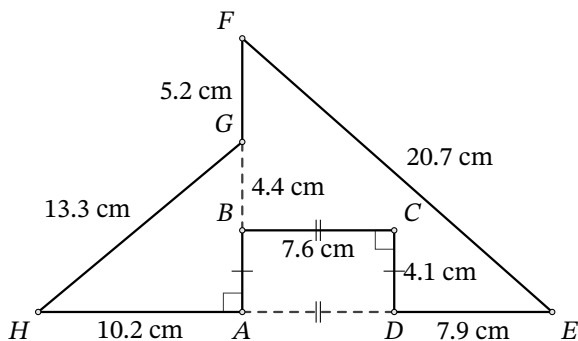
2.



3.



4.



Area and Perimeter of Composite Shapes (C) Answers

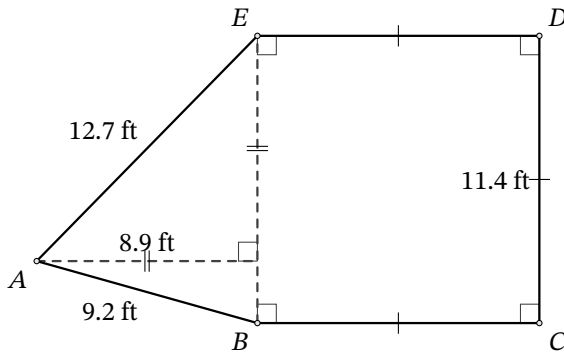
Name: _____

Date: _____

Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

1.



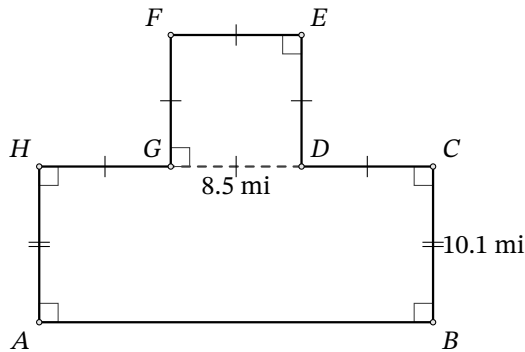
Area

$$\begin{aligned} & (\text{Area of } ABE) + (\text{Area of } BCDE) \\ &= \left(\frac{11.4 \times 8.9}{2} \right) + (11.4^2) \\ &= 50.73 + 129.96 \\ &= 180.7 \text{ ft}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EA \\ &= 9.2 + 11.4 + 11.4 + 11.4 + 12.7 \\ &= 56.1 \text{ ft} \end{aligned}$$

2.



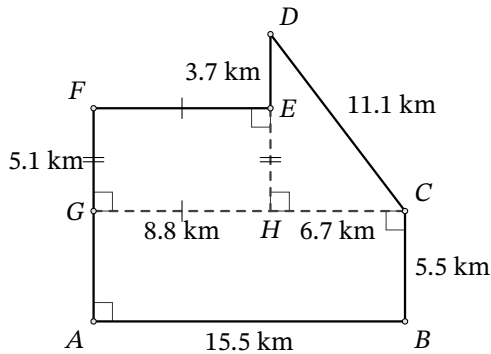
Area

$$\begin{aligned} & (\text{Area of } ABCH) + (\text{Area of } DEFG) \\ &= (10.1 \times 25.5) + (8.5^2) \\ &= 257.55 + 72.25 \\ &= 329.8 \text{ mi}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GH + HA \\ &= 25.5 + 10.1 + 8.5 + 8.5 + 8.5 + 8.5 + 8.5 + 10.1 \\ &= 88.2 \text{ mi} \end{aligned}$$

3.



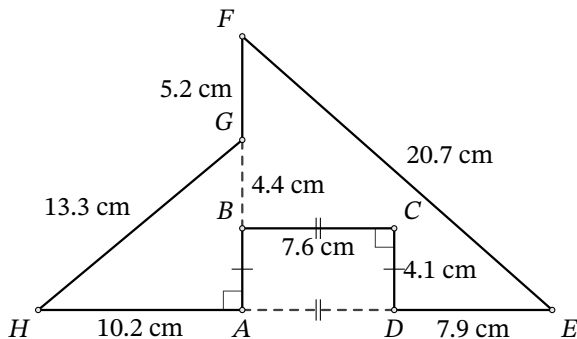
Area

$$\begin{aligned} & (\text{Area of } ABCG) + (\text{Area of } EFGH) + (\text{Area of } CDH) \\ &= (5.5 \times 15.5) + (5.1 \times 8.8) + \left(\frac{6.7 \times 8.8}{2} \right) \\ &= 85.25 + 44.88 + 29.48 \\ &= 159.6 \text{ km}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FA \\ &= 15.5 + 5.5 + 11.1 + 3.7 + 8.8 + 10.6 \\ &= 55.2 \text{ km} \end{aligned}$$

4.



Area

$$\begin{aligned} & (\text{Area of } AGH) + (\text{Area of } AEF) - (\text{Area of } ADCB) \\ &= \left(\frac{10.2 \times 8.5}{2} \right) + \left(\frac{15.5 \times 13.7}{2} \right) - (4.1 \times 7.6) \\ &= 43.35 + 106.175 - 31.16 \\ &= 118.4 \text{ cm}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GH + HA \\ &= 4.1 + 7.6 + 4.1 + 7.9 + 20.7 + 5.2 + 13.3 + 10.2 \\ &= 73.1 \text{ cm} \end{aligned}$$

Area and Perimeter of Composite Shapes (D)

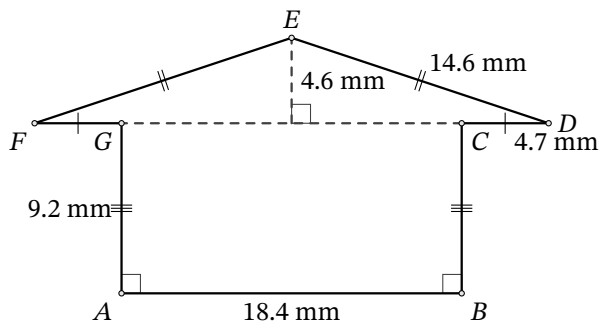
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Date: _____

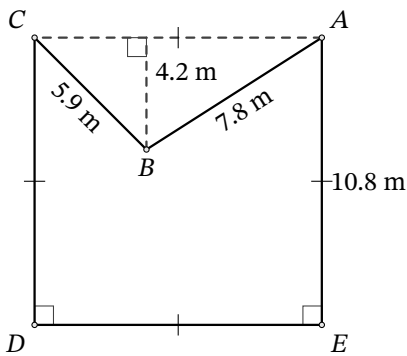
Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

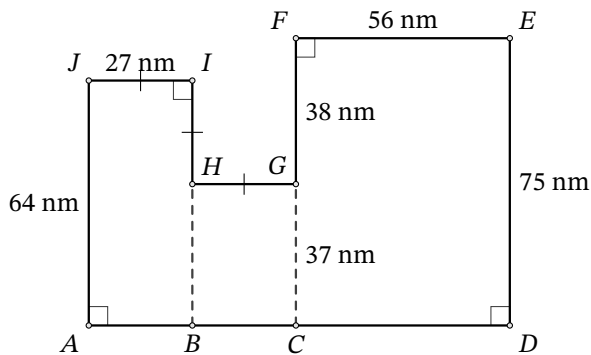
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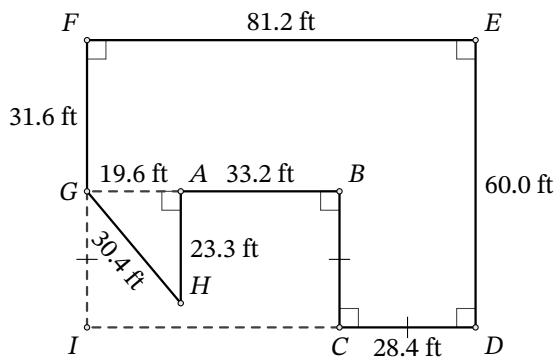
2.



3.



4.



Area and Perimeter of Composite Shapes (D) Answers

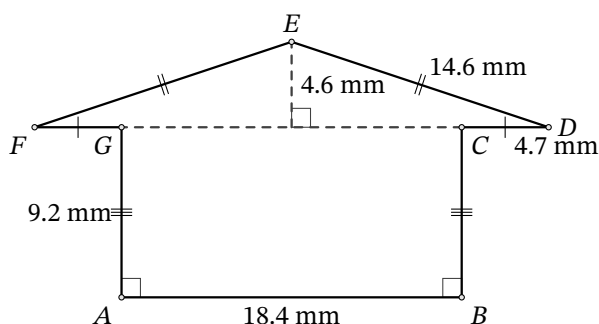
Name: _____

Date: _____

Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

1.



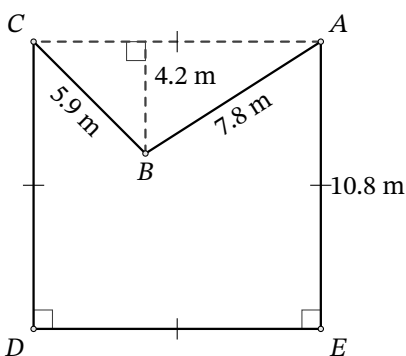
Area

$$\begin{aligned} & (\text{Area of } ABCG) + (\text{Area of } DEF) \\ &= (9.2 \times 18.4) + \left(\frac{27.8 \times 4.6}{2} \right) \\ &= 169.28 + 63.94 \\ &= 233.2 \text{ mm}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GA \\ &= 18.4 + 9.2 + 4.7 + 14.6 + 14.6 + 4.7 + 9.2 \\ &= 75.4 \text{ mm} \end{aligned}$$

2.



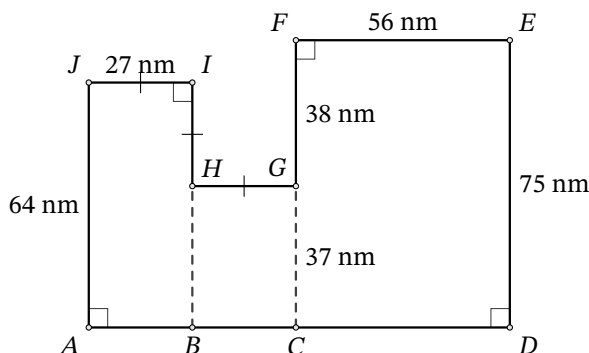
Area

$$\begin{aligned} & (\text{Area of } ACDE) - (\text{Area of } ACB) \\ &= (10.8^2) - \left(\frac{10.8 \times 4.2}{2} \right) \\ &= 116.64 - 22.68 \\ &= 94.0 \text{ m}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EA \\ &= 7.8 + 5.9 + 10.8 + 10.8 + 10.8 \\ &= 46.1 \text{ m} \end{aligned}$$

3.



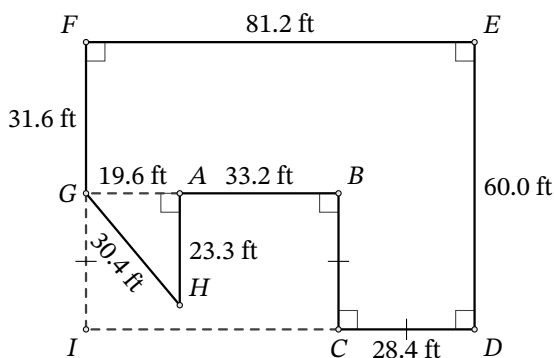
Area

$$\begin{aligned} & (\text{Area of } ABIJ) + (\text{Area of } BCGH) + (\text{Area of } CDEF) \\ &= (64 \times 27) + (37 \times 27) + (75 \times 56) \\ &= 1728 + 999 + 4200 \\ &= 6927 \text{ nm}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AD + DE + EF + FG + GH + HI + IJ + JA \\ &= 110 + 75 + 56 + 38 + 27 + 27 + 27 + 64 \\ &= 424 \text{ nm} \end{aligned}$$

4.



Area

$$\begin{aligned} & (\text{Area of } FEDE) - (\text{Area of } BCGH) + (\text{Area of } AGH) \\ &= (60.0 \times 81.2) - (28.4 \times 23.3) + \left(\frac{19.6 \times 23.3}{2} \right) \\ &= 4872 - 1499.52 + 228.34 \\ &= 3600.8 \text{ ft}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GH + HA \\ &= 33.2 + 28.4 + 28.4 + 60.0 + 81.2 + 31.6 + 30.4 + 23.3 \\ &= 316.5 \text{ ft} \end{aligned}$$

Area and Perimeter of Composite Shapes (E)

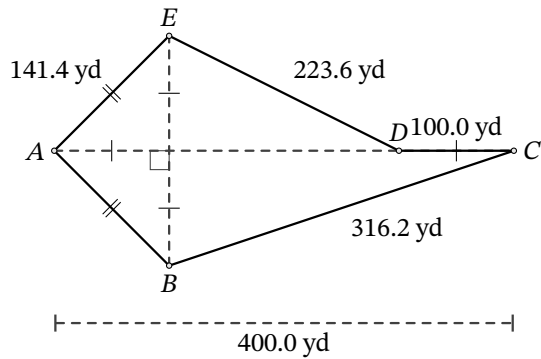
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Date: _____

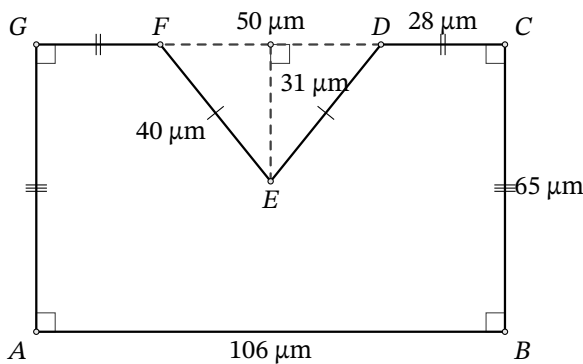
Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

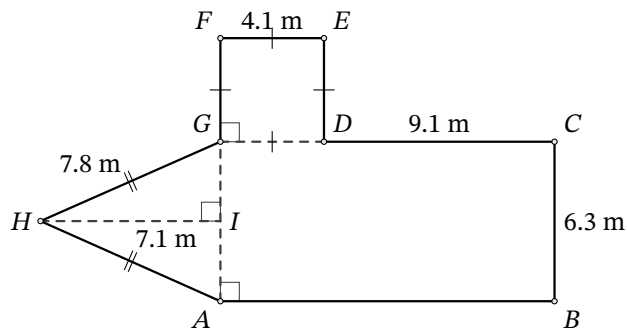
1.



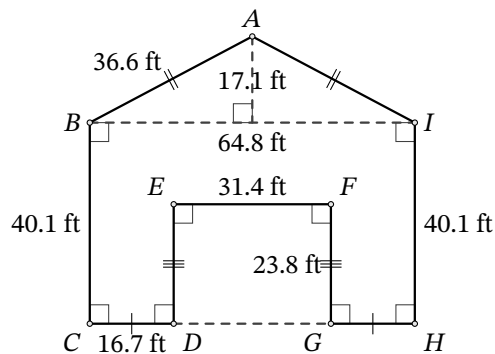
2.



3.



4.



Area and Perimeter of Composite Shapes (E) Answers

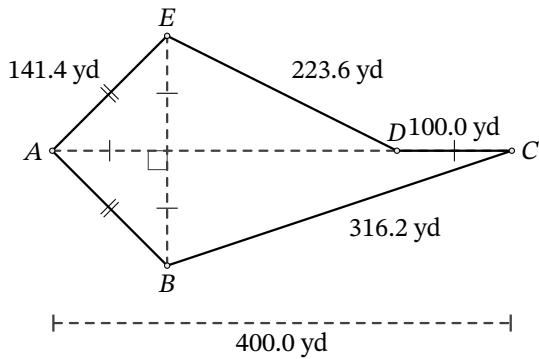
Name: _____

Date: _____

Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

1.



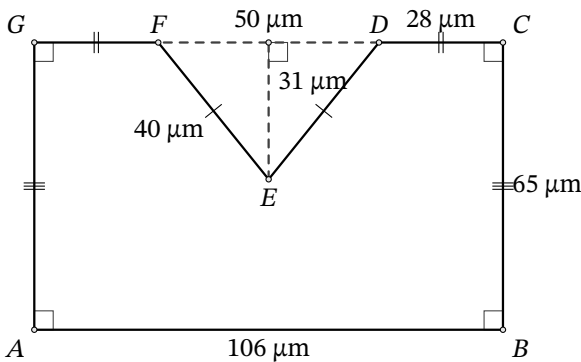
Area

$$\begin{aligned} & (\text{Area of } ABC) + (\text{Area of } ADE) \\ &= \left(\frac{400.0 \times 100.0}{2}\right) + \left(\frac{300.0 \times 100.0}{2}\right) \\ &= 20,000.0 + 15,000.0 \\ &= 35,000.0 \text{ yd}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EA \\ &= 141.4 + 316.2 + 100.0 + 223.6 + 141.4 \\ &= 922.6 \text{ yd} \end{aligned}$$

2.



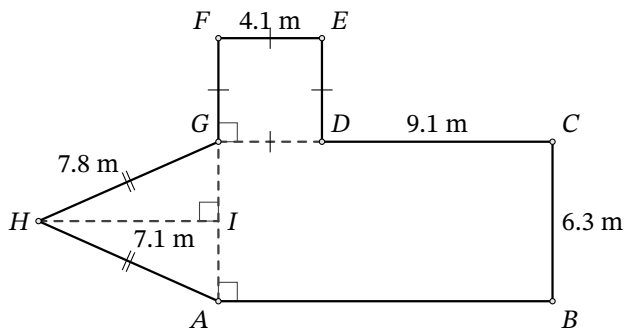
Area

$$\begin{aligned} & (\text{Area of } ABCG) - (\text{Area of } DFE) \\ &= (65 \times 106) - \left(\frac{50 \times 31}{2}\right) \\ &= 6890 - 775 \\ &= 6115 \mu\text{m}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GA \\ &= 106 + 65 + 28 + 40 + 40 + 28 + 65 \\ &= 372 \mu\text{m} \end{aligned}$$

3.



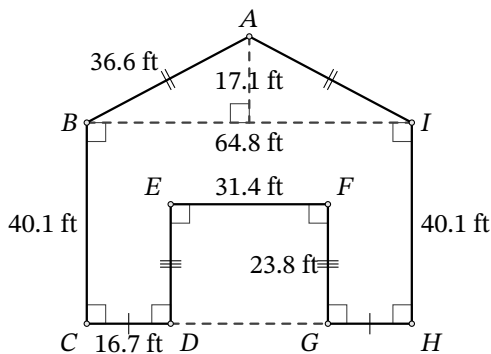
Area

$$\begin{aligned} & (\text{Area of } AGH) + (\text{Area of } ABCG) + (\text{Area of } DEFG) \\ &= \left(\frac{6.3 \times 7.1}{2}\right) + (6.3 \times 9.1) + (4.1^2) \\ &= 22.365 + 57.27 + 16.81 \\ &= 96.445 \text{ m}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GH + HA \\ &= 9.1 + 6.3 + 9.1 + 4.1 + 4.1 + 4.1 + 7.8 + 7.8 \\ &= 56.5 \text{ m} \end{aligned}$$

4.



Area

$$\begin{aligned} & (\text{Area of } BCHI) - (\text{Area of } DGFE) + (\text{Area of } ABE) \\ &= (40.1 \times 64.8) - (23.8 \times 31.4) + \left(\frac{64.8 \times 17.1}{2}\right) \\ &= 2598.48 - 747.32 + 554.04 \\ &= 2405.2 \text{ ft}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GH + HI + IA \\ &= 36.6 + 40.1 + 16.7 + 23.8 + 31.4 + 23.8 + 16.7 + 40.1 + 36.6 \\ &= 265.8 \text{ ft} \end{aligned}$$

Area and Perimeter of Composite Shapes (F)

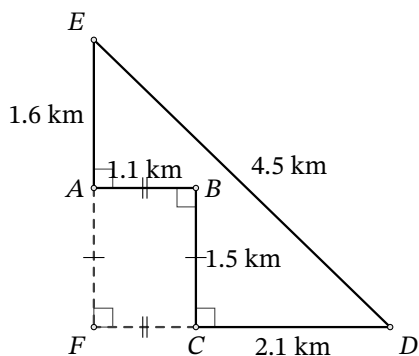
Name: _____

Date: _____

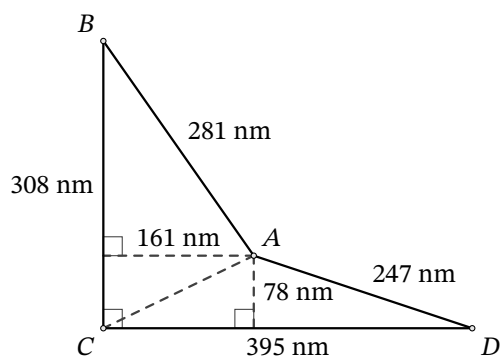
Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

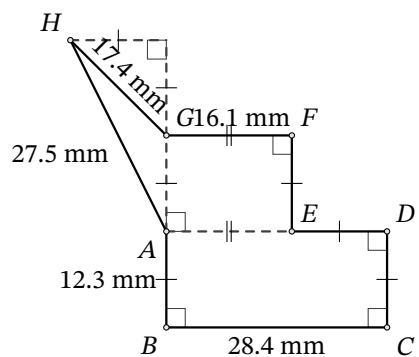
1.



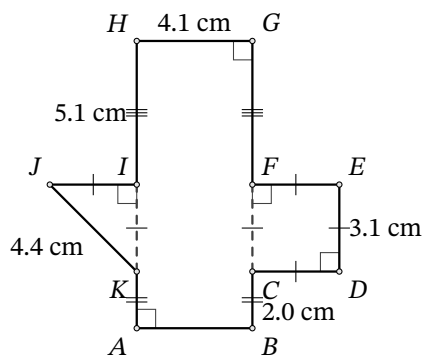
2.



3.



4.



Area and Perimeter of Composite Shapes (F) Answers

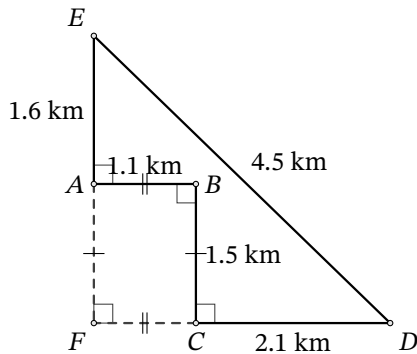
Name: _____

Date: _____

Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

1.



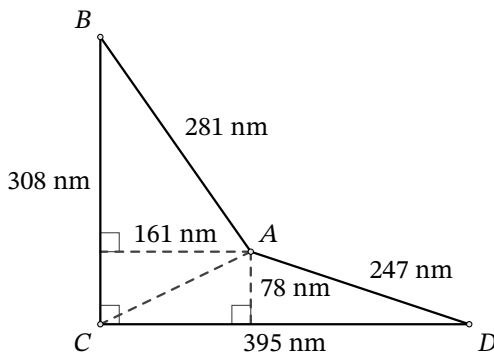
Area

$$\begin{aligned} & (\text{Area of } DEF) - (\text{Area of } AFCD) \\ &= \left(\frac{3.2 \times 3.1}{2} \right) - (1.5 \times 1.1) \\ &= 4.96 - 1.65 \\ &= 3.3 \text{ km}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EA \\ &= 1.1 + 1.5 + 2.1 + 4.5 + 1.6 \\ &= 10.8 \text{ km} \end{aligned}$$

2.



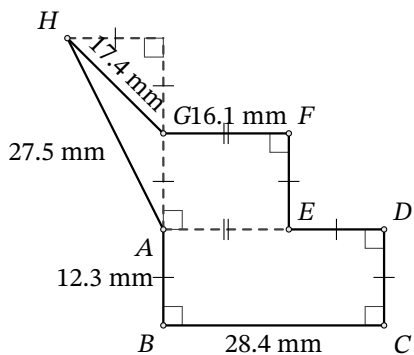
Area

$$\begin{aligned} & (\text{Area of } ABC) + (\text{Area of } ACD) \\ &= \left(\frac{308 \times 161}{2} \right) + \left(\frac{395 \times 78}{2} \right) \\ &= 24,794 + 15,405 \\ &= 40,199 \text{ nm}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DA \\ &= 281 + 308 + 395 + 247 \\ &= 1231 \text{ nm} \end{aligned}$$

3.



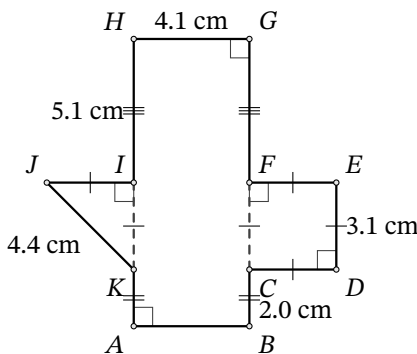
Area

$$\begin{aligned} & (\text{Area of } ABCD) + (\text{Area of } AEFGB) + (\text{Area of } AGH) \\ &= (12.3 \times 28.4) + (12.3 \times 16.1) + \left(\frac{12.3 \times 12.3}{2} \right) \\ &= 349.32 + 198.03 + 75.645 \\ &= 623.0 \text{ mm}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GH + HA \\ &= 12.3 + 28.4 + 12.3 + 12.3 + 12.3 + 16.1 + 17.4 + 27.5 \\ &= 138.6 \text{ mm} \end{aligned}$$

4.



Area

$$\begin{aligned} & (\text{Area of } IJK) + (\text{Area of } ABGH) + (\text{Area of } CDEF) \\ &= \left(\frac{3.1 \times 3.1}{2} \right) + (10.2 \times 4.1) + (3.1^2) \\ &= 4.805 + 41.82 + 9.61 \\ &= 56.2 \text{ cm}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GH + HI + IJ + JK + KA \\ &= 4.1 + 2.0 + 3.1 + 3.1 + 3.1 + 5.1 + 4.1 + 5.1 + 3.1 + 4.4 + 2.0 \\ &= 39.2 \text{ cm} \end{aligned}$$

Area and Perimeter of Composite Shapes (G)

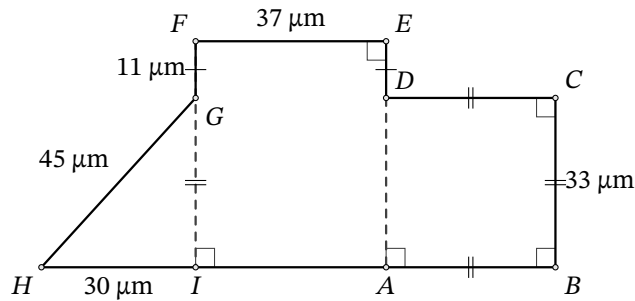
Name: _____

Date: _____

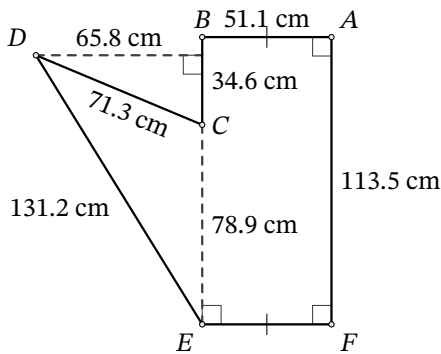
Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

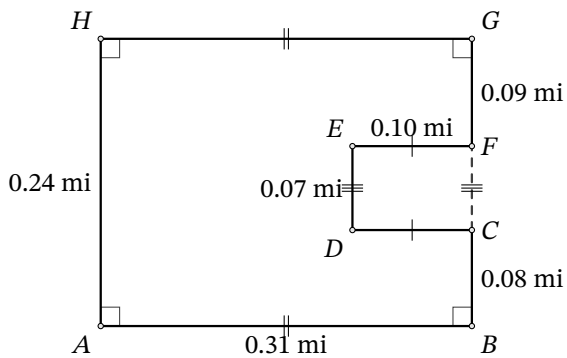
1.



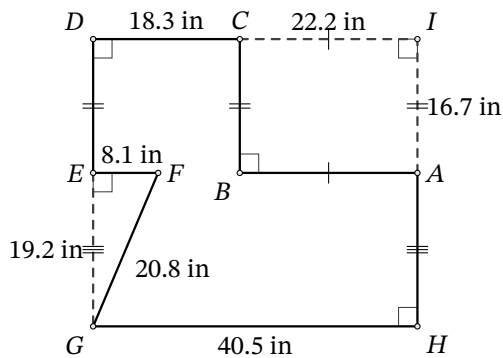
2.



3.



4.



Area and Perimeter of Composite Shapes (G) Answers

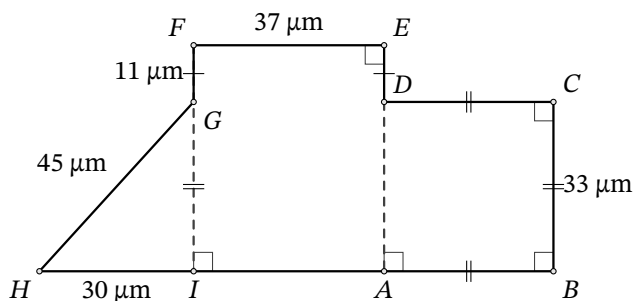
Name: _____

Date: _____

Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

1.



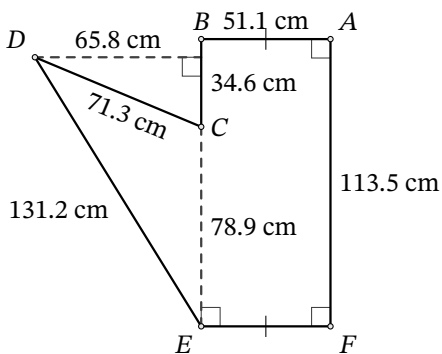
Area

$$\begin{aligned} & (\text{Area of } GHI) + (\text{Area of } AEFI) + (\text{Area of } ABCD) \\ &= \left(\frac{30 \times 33}{2}\right) + (44 \times 37) + (33^2) \\ &= 495 + 1628 + 1089 \\ &= 3212 \mu\text{m}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= BC + CD + DE + EF + FG + GH + HB \\ &= 33 + 33 + 11 + 37 + 11 + 45 + 100 \\ &= 270 \mu\text{m} \end{aligned}$$

2.



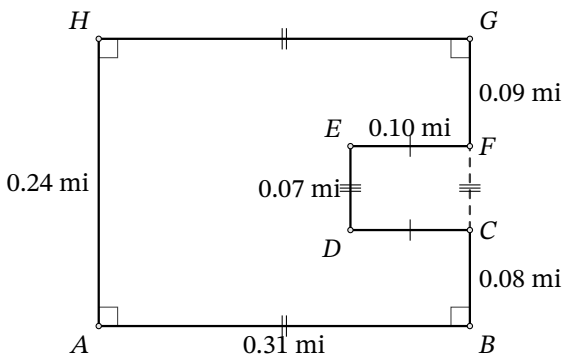
Area

$$\begin{aligned} & (\text{Area of } CDE) + (\text{Area of } ABEF) \\ &= \left(\frac{78.9 \times 65.8}{2}\right) + (113.5 \times 51.1) \\ &= 2595.81 + 5799.85 \\ &= 8395.7 \text{ cm}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FA \\ &= 51.1 + 34.6 + 71.3 + 131.2 + 51.1 + 113.5 \\ &= 452.8 \text{ cm} \end{aligned}$$

3.



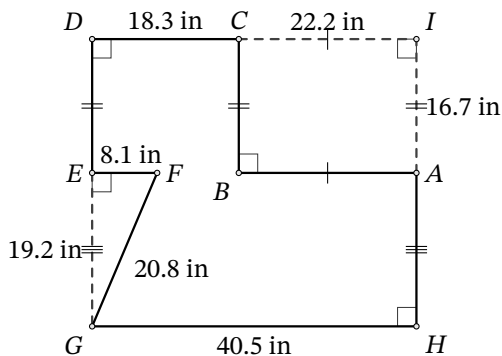
Area

$$\begin{aligned} & (\text{Area of } ABGH) - (\text{Area of } CFED) \\ &= (0.24 \times 0.31) - (0.07 \times 0.10) \\ &= 0.0744 - 0.007 \\ &= 0.067 \text{ mi}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GH + HA \\ &= 0.31 + 0.08 + 0.10 + 0.07 + 0.10 + 0.09 + 0.31 + 0.24 \\ &= 1.30 \text{ mi} \end{aligned}$$

4.



Area

$$\begin{aligned} & (\text{Area of } DGHI) - (\text{Area of } EGF) - (\text{Area of } AICB) \\ &= (35.9 \times 40.5) - \left(\frac{19.2 \times 8.1}{2}\right) - (16.7 \times 22.2) \\ &= 1453.95 - 77.76 - 370.74 \\ &= 1005.5 \text{ in}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GH + HA \\ &= 22.2 + 16.7 + 18.3 + 16.7 + 8.1 + 20.8 + 40.5 + 19.2 \\ &= 162.5 \text{ in} \end{aligned}$$

Area and Perimeter of Composite Shapes (H)

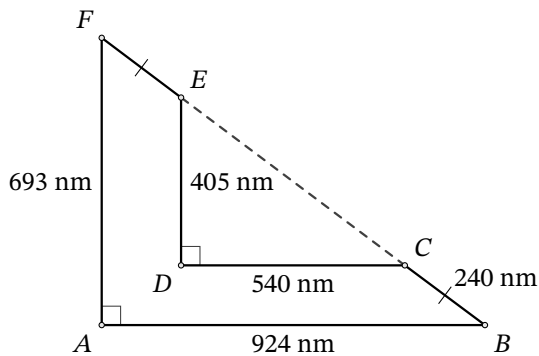
Name: _____

Date: _____

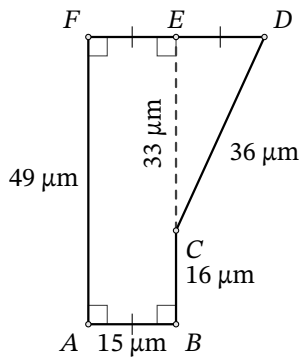
Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

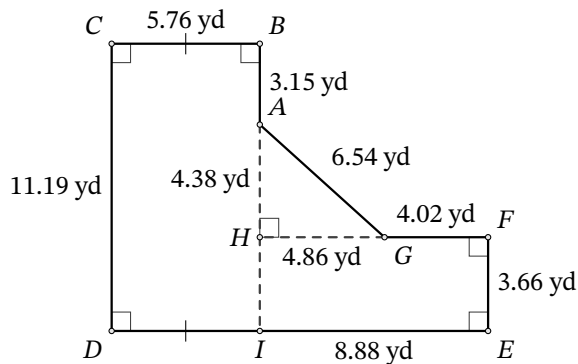
1.



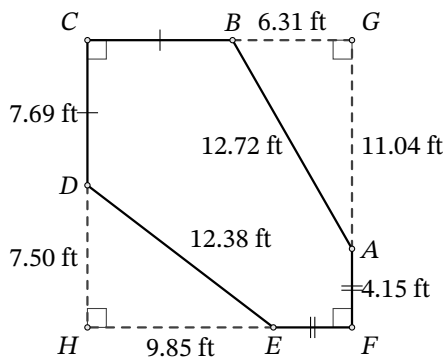
2.



3.



4.



Area and Perimeter of Composite Shapes (H) Answers

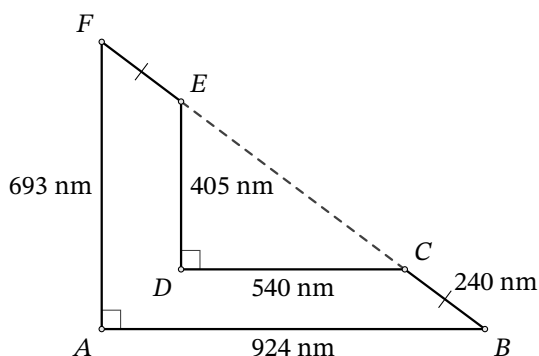
Name: _____

Date: _____

Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

1.



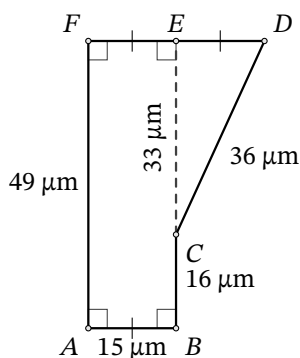
Area

$$\begin{aligned} & (\text{Area of } ABF) - (\text{Area of } CED) \\ &= \left(\frac{924 \times 693}{2} \right) - \left(\frac{540 \times 405}{2} \right) \\ &= 320,166 - 109,350 \\ &= 210,816 \text{ nm}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FA \\ &= 924 + 240 + 540 + 405 + 240 + 693 \\ &= 3042 \text{ nm} \end{aligned}$$

2.



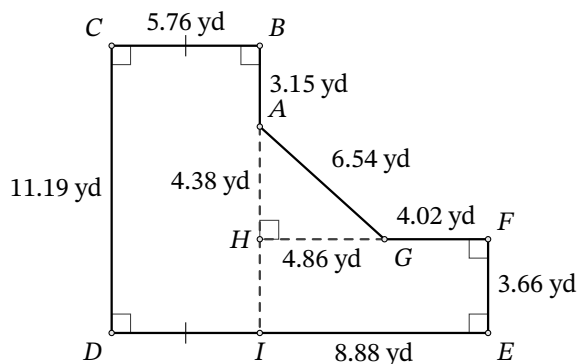
Area

$$\begin{aligned} & (\text{Area of } ABEF) + (\text{Area of } CDE) \\ &= (49 \times 15) + \left(\frac{15 \times 33}{2} \right) \\ &= 735 + 247.5 \\ &= 982.5 \text{ micrometers}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DF + FA \\ &= 15 + 16 + 36 + 30 + 49 \\ &= 146 \text{ micrometers} \end{aligned}$$

3.



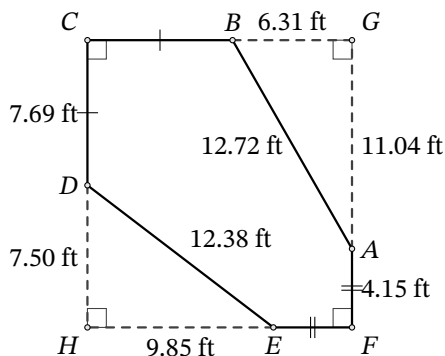
Area

$$\begin{aligned} & (\text{Area of } BCDI) + (\text{Area of } EFHI) + (\text{Area of } AHG) \\ &= (11.19 \times 5.76) + (3.66 \times 8.88) + \left(\frac{4.86 \times 4.38}{2} \right) \\ &= 64.4544 + 32.5008 + 10.6434 \\ &= 107.60 \text{ yd}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GA \\ &= 3.15 + 5.76 + 11.19 + 14.64 + 3.66 + 4.02 + 6.54 \\ &= 48.96 \text{ yd} \end{aligned}$$

4.



Area

$$\begin{aligned} & (\text{Area of } CHFG) - (\text{Area of } DHE) - (\text{Area of } AGB) \\ &= (15.19 \times 14.00) - \left(\frac{9.85 \times 7.50}{2} \right) - \left(\frac{6.31 \times 11.04}{2} \right) \\ &= 212.66 - 36.9375 - 34.8312 \\ &= 140.89 \text{ ft}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FA \\ &= 12.72 + 7.69 + 7.69 + 12.38 + 4.15 + 4.15 \\ &= 48.78 \text{ ft} \end{aligned}$$

Area and Perimeter of Composite Shapes (I)

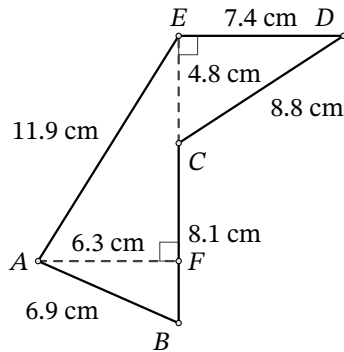
Name: _____

Date: _____

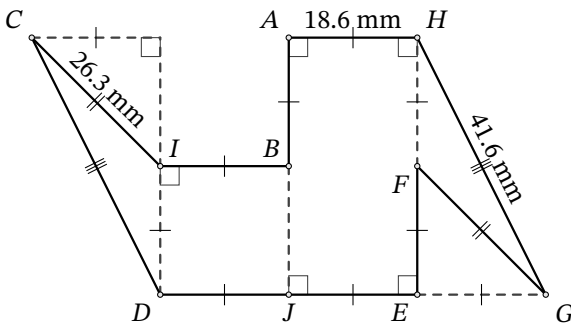
Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

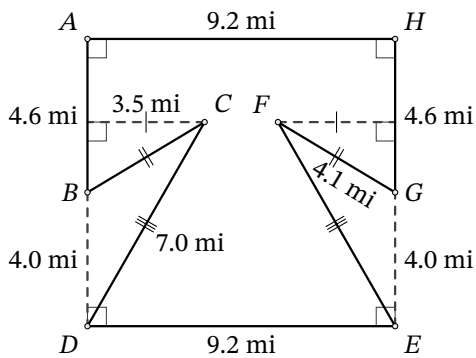
1.



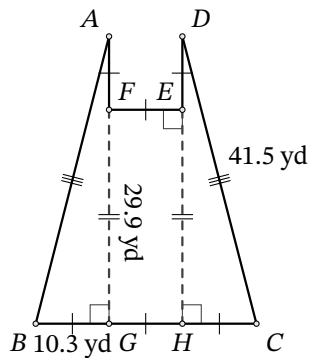
2.



3.



4.



Area and Perimeter of Composite Shapes (I) Answers

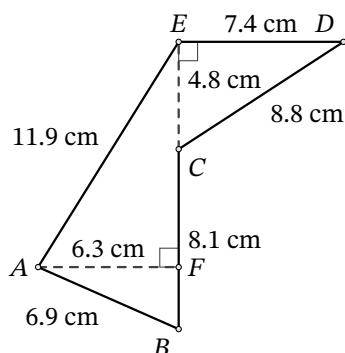
Name: _____

Date: _____

Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

1.



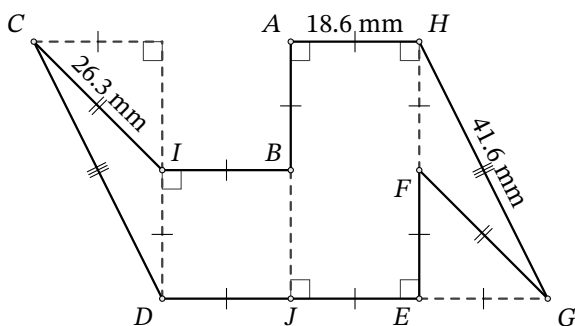
Area

$$\begin{aligned} & (\text{Area of } ABE) + (\text{Area of } CDE) \\ &= \left(\frac{12.9 \times 6.3}{2}\right) + \left(\frac{7.4 \times 4.8}{2}\right) \\ &= 40.635 + 17.76 \\ &= 58.4 \text{ cm}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EA \\ &= 6.9 + 8.1 + 8.8 + 7.4 + 11.9 \\ &= 43.1 \text{ cm} \end{aligned}$$

2.



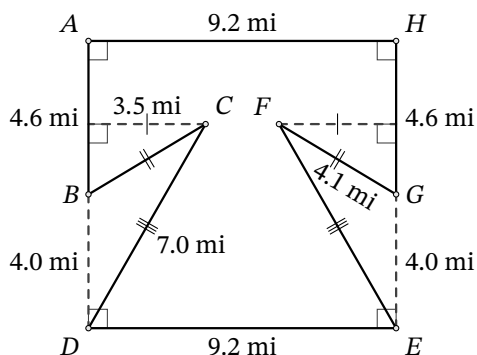
Area

$$\begin{aligned} & (\text{Area of } CDI) + (\text{Area of } BDE) + (\text{Area of } ABE) + \\ & (\text{Area of } FGHI) \\ &= \left(\frac{18.6 \times 26.3}{2}\right) + (18.6^2) + (37.2 \times 18.6) + \left(\frac{18.6 \times 18.6}{2}\right) \\ &= 172.98 + 345.96 + 691.92 + 172.98 \\ &= 1383.8 \text{ mm}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BI + IC + CD + DE + EF + FG + GH + HA \\ &= 18.6 + 18.6 + 26.3 + 41.6 + 37.2 + 18.6 + 26.3 + 41.6 + 18.6 \\ &= 247.4 \text{ mm} \end{aligned}$$

3.



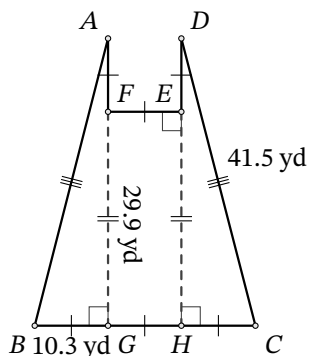
Area

$$\begin{aligned} & (\text{Area of } ADE) - (\text{Area of } BFC) - (\text{Area of } EFG) \\ &= (8.6 \times 9.2) - \left(\frac{4.0 \times 3.5}{2}\right) - \left(\frac{4.0 \times 3.5}{2}\right) \\ &= 79.12 - 7.0 - 7.0 \\ &= 65.1 \text{ mi}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GH + HA \\ &= 4.6 + 4.1 + 7.0 + 9.2 + 7.0 + 4.1 + 4.6 + 9.2 \\ &= 49.8 \text{ mi} \end{aligned}$$

4.



Area

$$\begin{aligned} & (\text{Area of } ABG) + (\text{Area of } EFG) + (\text{Area of } CDH) \\ &= \left(\frac{10.3 \times 40.2}{2}\right) + (29.9 \times 10.3) + \left(\frac{10.3 \times 40.2}{2}\right) \\ &= 207.03 + 307.97 + 207.03 \\ &= 722.0 \text{ yd}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FA \\ &= 41.5 + 30.9 + 41.5 + 10.3 + 10.3 + 10.3 \\ &= 144.8 \text{ yd} \end{aligned}$$

Area and Perimeter of Composite Shapes (J) Answers

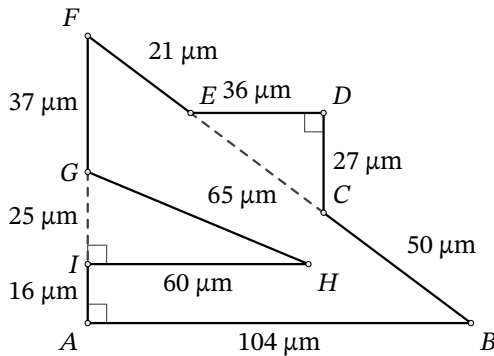
Name: _____

Date: _____

Score: _____

Calculate the area and perimeter of each figure. Round to the number of decimals in the measurements.

1.



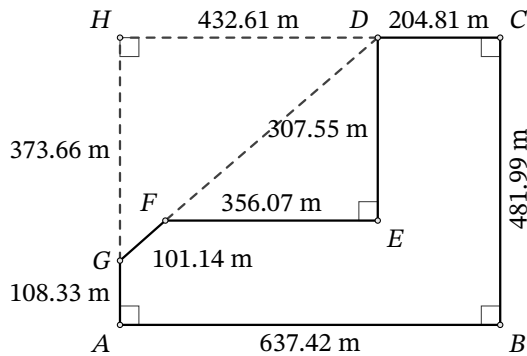
Area

$$\begin{aligned} & (\text{Area of } ABF) - (\text{Area of } GIH) + (\text{Area of } CDE) \\ &= \left(\frac{104 \times 78}{2}\right) - \left(\frac{60 \times 25}{2}\right) + \left(\frac{36 \times 27}{2}\right) \\ &= 4056 - 750 + 486 \\ &= 3792 \mu\text{m}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GH + HI + IA \\ &= 104 + 50 + 27 + 36 + 21 + 37 + 65 + 60 + 16 \\ &= 416 \mu\text{m} \end{aligned}$$

2.



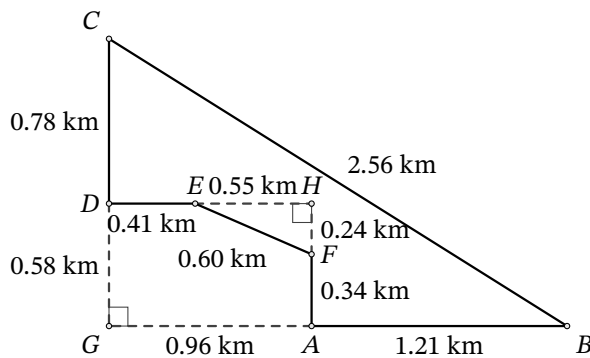
Area

$$\begin{aligned} & (\text{Area of } ABCH) - (\text{Area of } DHG) - (\text{Area of } DFE) \\ &= (481.99 \times 637.42) - \left(\frac{432.61 \times 373.66}{2}\right) - \left(\frac{356.07 \times 307.55}{2}\right) \\ &= 307,230.0658 - 80,824.5263 - 54,754.66425 \\ &= 171,650.88 \text{ m}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GA \\ &= 637.42 + 481.99 + 204.81 + 307.55 + 356.07 + 101.14 + 108.33 \\ &= 2197.31 \text{ m} \end{aligned}$$

3.



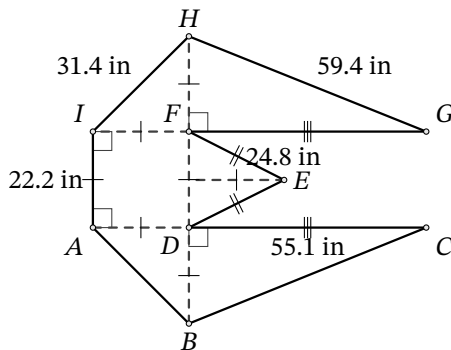
Area

$$\begin{aligned} & (\text{Area of } BCG) - (\text{Area of } AHDG) + (\text{Area of } EFH) \\ &= \left(\frac{2.17 \times 1.36}{2}\right) - (0.58 \times 0.96) + \left(\frac{0.55 \times 0.24}{2}\right) \\ &= 1.4756 - 0.5568 + 0.066 \\ &= 0.98 \text{ km}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FA \\ &= 1.21 + 2.56 + 0.78 + 0.41 + 0.60 + 0.34 \\ &= 5.90 \text{ km} \end{aligned}$$

4.



Area

$$\begin{aligned} & (\text{Area of } ABC) + (\text{Area of } ADFI) + (\text{Area of } DEF) + \\ & (\text{Area of } GHI) \\ &= \left(\frac{77.3 \times 22.2}{2}\right) + (22.2^2) + \left(\frac{22.2 \times 22.2}{2}\right) + \left(\frac{77.3 \times 22.2}{2}\right) \\ &= 858.03 + 492.84 + 246.42 + 858.03 \\ &= 2455.3 \text{ in}^2 \end{aligned}$$

Perimeter

$$\begin{aligned} &= AB + BC + CD + DE + EF + FG + GH + HI + IA \\ &= 31.4 + 59.4 + 55.1 + 24.8 + 24.8 + 55.1 + 59.4 + 31.4 + 22.2 \\ &= 363.6 \text{ in} \end{aligned}$$