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.

G

12.7 nm

7.5 nm

F 10.3 nm *E*

9.0 nm   8.5 nm   9.7 nm

A   *B*   18.1 nm   *C*   *D*

2.

J   14.4 μm   *I*

5.6 μm

5.1 μm

H   *F*

G   4.1 μm   *E*   *D*   7.1 μm

A   20.2 μm   *B*   *C*

3.

F   *G*   160.9 ft   *H*   *E*

43.1 ft   27.4 ft

52.8 ft   *I*   41.5 ft

A   25.5 ft   48.7 ft   *D*

65.7 ft   *C*   13.6 ft

B

4.

A

3.76 m   5.95 m

G   *F*

C   *B*

D   2.66 m   *E*

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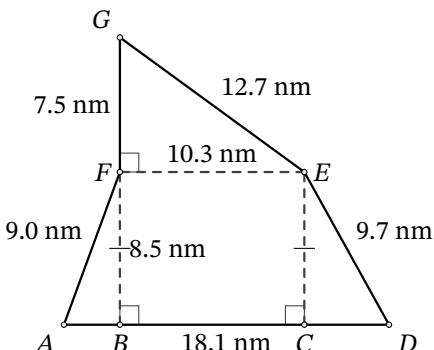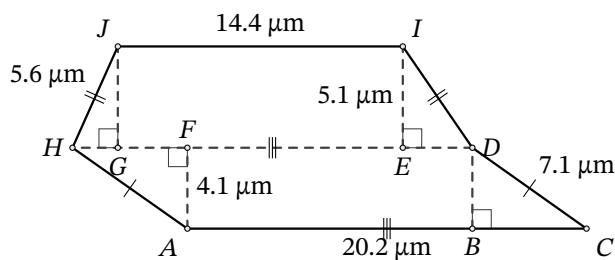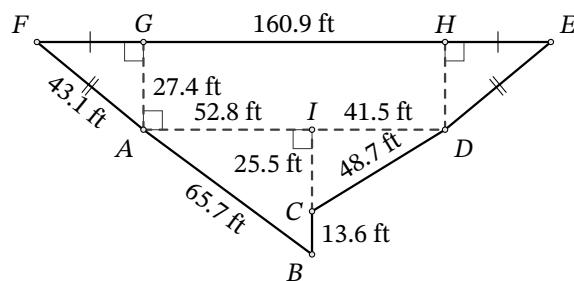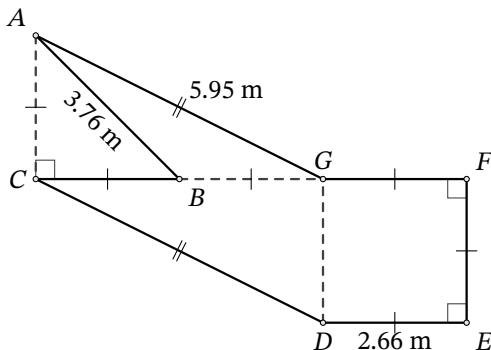
Area and Perimeter of Composite Shapes (G) Answers

Name: _____ Date: _____ Score: _____

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

1.
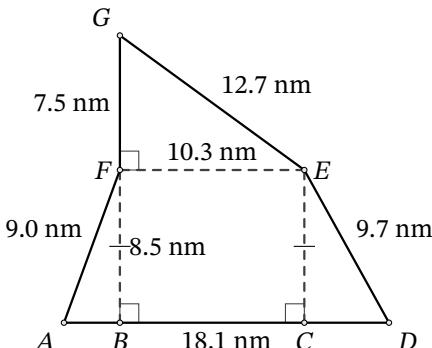
Area

(Area of $ADEF$) + (Area of EGF)
$= \left(\frac{18.1+10.3}{2} \times 8.5\right) + \left(\frac{10.3 \times 7.5}{2}\right)$
$= 120.7 + 38.625$
$= 159.3$ nm^2

Perimeter

$= AD + DE + EG + GF + FA$
$= 18.1 + 9.7 + 12.7 + 7.5 + 9.0$
$= 57.0$ nm

2.
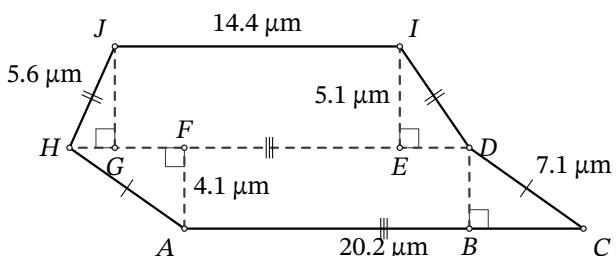
Area

(Area of $ACDH$) + (Area of $DIJH$)
$= (20.2 \times 4.1) + \left(\frac{20.2+14.4}{2} \times 5.1\right)$
$= 82.82 + 88.23$
$= 171.1$ μm^2

Perimeter

$= AC + CD + DI + IJ + JH + HA$
$= 20.2 + 7.1 + 5.6 + 14.4 + 5.6 + 7.1$
$= 60.0$ μm

3.
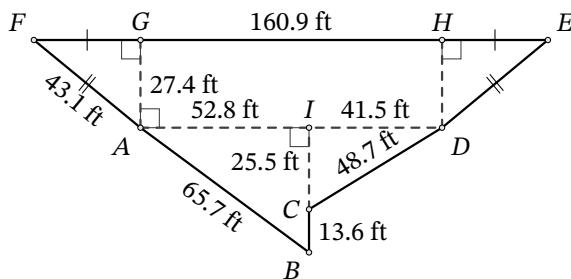
Area

(Area of ABI) + (Area of CDI) + (Area of $ADEF$)
$= \left(\frac{52.8 \times 39.1}{2}\right) + \left(\frac{41.5 \times 25.5}{2}\right) + \left(\frac{160.9+94.3}{2} \times 27.4\right)$
$= 1032.24 + 529.125 + 3496.24$
$= 5057.6$ ft^2

Perimeter

$= AB + BC + CD + DE + EF + FA$
$= 65.7 + 13.6 + 48.7 + 43.1 + 160.9 + 43.1$
$= 375.1$ ft

4.
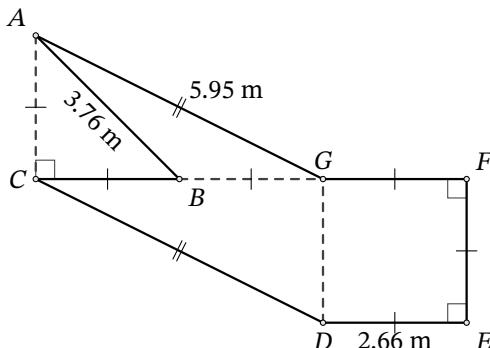
Area

(Area of $ACDG$) − (Area of ACB) + (Area of $DEFG$)
$= (2.66 \times 5.32) - \left(\frac{2.66 \times 2.66}{2}\right) + \left(2.66^2\right)$
$= 14.1512 - 3.5378 + 7.0756$
$= 17.69$ m^2

Perimeter

$= AB + BC + CD + DE + EF + FG + GA$
$= 3.76 + 2.66 + 5.95 + 2.66 + 2.66 + 2.66 + 5.95$
$= 26.3$ m