Geometry Practice G.MG.A.3: Heron's Formula www.jmap.org

NAME:

1. Find the area of a triangle if its three sides are 7 inches, 8 inches, and 9 inches. Use Heron's formula $\left\{A = \sqrt{S(S-a)(S-b)(S-c)}\right\}$, where *a*, *b*, and *c* are the lengths of the sides and $S = \frac{a+b+c}{2}$. [A] 4.9 in.² [B] 24 in.² [C] 7.75 in.² [D] 26.83 in.²

2. Find the area of a triangle if its three sides are 5 inches, 6 inches, and 7 inches. Use Heron's formula $\left\{A = \sqrt{S(S-a)(S-b)(S-c)}\right\}$, where *a*, *b*, and *c* are the lengths of the sides and $S = \frac{a+b+c}{2}$. [A] 18 in.² [B] 14.7 in.² [C] 4.9 in.² [D] 4.24 in.²

3. Find the area of a triangle if its three sides are 8 inches, 9 inches, and 13 inches. Use Heron's formula $\left\{A = \sqrt{S(S-a)(S-b)(S-c)}\right\}$, where *a*, *b*, and *c* are the lengths of the sides and $S = \frac{a+b+c}{2}$. [A] 5.48 in.² [B] 35.5 in.² [C] 30 in.² [D] 9.17 in.²

4. Find the area of a triangle if its three sides are 9 inches, 10 inches, and 15 inches. Use Heron's formula $\left\{A = \sqrt{S(S-a)(S-b)(S-c)}\right\}$, where *a*, *b*, and *c* are the lengths of the sides and $S = \frac{a+b+c}{2}$. [A] 10.58 in.² [B] 43.63 in.² [C] 5.83 in.² [D] 34 in.²

5. Find the area of a triangle if its three sides are 4 inches, 5 inches, and 7 inches. Use Heron's formula $\left\{A = \sqrt{S(S-a)(S-b)(S-c)}\right\}$, where *a*, *b*, and *c* are the lengths of the sides and $S = \frac{a+b+c}{2}$. [A] 3.46 in.² [B] 16 in.² [C] 9.8 in.² [D] 4 in.²

6. Find the area of a triangle if its three sides are 8 inches, 9 inches, and 11 inches. Use Heron's formula $\left\{A = \sqrt{S(S-a)(S-b)(S-c)}\right\}$, where *a*, *b*, and *c* are the lengths of the sides and $S = \frac{a+b+c}{2}$. [A] 5.29 in.² [B] 9.49 in.² [C] 35.5 in.² [D] 28 in.²

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- [1] D
- [2] <u>B</u>
- [3] <u>B</u>
- [4] <u>B</u>_____
- [5] <u>C</u>_____
- [6] <u>C</u>