

Name_____

Block_____

MM4A6c. Apply the law of sines and/or the law of cosines.Solve $\triangle ABC$:

1. $A = 79^\circ, B = 33^\circ, a = 7$

2. $a = 5, b = 8, B = 110^\circ$

3. $a = 14.7, A = 29.3^\circ, C = 33^\circ$

4. $A = 34^\circ, B = 74^\circ, c = 5$

5. $c = 41, A = 22.9^\circ, C = 55.1^\circ$

6. $a = 5, b = 7, c = 6$

8. $B = 85^\circ, a = 6, c = 4$

MM4A7. Students will verify and apply $A = \frac{1}{2}ab\sin C$ to find the area of a triangle. Students will use Heron's formula to find the area of a triangle.

9. A triangle with two sides that measure 6 yd and 2 yd with an included angle of 10° .
10. A triangle with two sides that measure 6 m and 8 m with an included angle of 137° .
11. $a = 5\text{cm}$, $b = 8\text{cm}$, $C = 39^\circ$.
12. $x = 8\text{ft}$, $y = 7\text{ft}$, $Z = 30^\circ$.
13. $q = 9\text{in}$, $p = 12\text{in}$, $r = 13\text{in}$
14. $t = 10\text{km}$, $r = 8\text{km}$, $s = 14\text{km}$
15. $f = 13\text{mi}$, $d = 4\text{mi}$, $e = 13\text{mi}$

MM4A5. Students will understand and use vectors.

13. Perform the indicated operation:
 \mathbf{u} is defined by $\langle -1, 2 \rangle$ and \mathbf{v} is defined by $\langle 3, -1 \rangle$, find $2\mathbf{u} - 3\mathbf{v}$.
14. Find the components, magnitude and direction of the vector.
Initial Point: $\langle -1, 5 \rangle$; Terminal Point $\langle 5, 3 \rangle$.
15. Find the unit vector of $5\mathbf{i} + 8\mathbf{j}$.
16. Find the components of the vector given $\|\mathbf{v}\| = 6$, $\theta = 24$