Practice Packet for Math 142 and MyMathTest Test 4: Trigonometry

This practice packet contains:

- 40 problems that cover topics included in Math& 142 (Precalculus II: Trigonometry), and MyMathTest Test 4: Trigonometry.
- Answers to all problems (p. 15)
- Instructions for using online Study Plan to brush up (p. 16)

Instructions:

- Take this as a test, without any help or any notes. This should NOT be taken more than once. It should take about an hour. You can use a calculator for these problems.
- Check your solutions after completing all problems (p. 15)
- If you scored 80% or higher, you should be prepared for MyMathTest Test 4: Trigonometry.
- If you did not score well, you can:
  - Use the online Study Plan (p. 16)
  - Attend a live brush-up workshop

Go to [http://placement.highline.edu/](http://placement.highline.edu/) or call 206-592-3251 for more information about taking the placement test or to find the schedule for brush-up workshops.

---

**MATH& 142 - Precalculus II**  
5 credits

**Prerequisite:** MyMathTest Algebra STEM 70 or MATH 141 with 2.0 min

**Course Description:** Prepares students for calculus sequence. Concepts, properties and algebra of trigonometric functions, including their graphs, inverses, laws of sines and cosines, identities and equations. Also covers vectors, polar coordinates and conic sections. GRAPHING CALCULATOR REQUIRED: TI-83 or 84 recommended.
1. Convert the angle in degrees to radians. Express your answer as a multiple of $\pi$.

$\ 390^\circ$

$390^\circ = \underline{\\ \ } \text{ radians}$ (Use integers or fractions for any numbers in the expression.)

2. Convert the angle in radians to degrees.

$\ -11\pi \text{ radians}$

$-11\pi \text{ radians} = \underline{\\ \ }^\circ$

3. Find a positive angle less than $2\pi$ that is coterminal with the given angle.

$\ \frac{13\pi}{4}$

A positive angle less than $2\pi$ that is coterminal with $\frac{13\pi}{4}$ is $\underline{\\ \ }$.

(Simplify your answer. Type your answer in terms of $\pi$. Use integers or fractions for any numbers in the expression.)

4. Find the length of the arc, $s$, on a circle of radius $r$ intercepted by a central angle $\theta$. Express the arc length in terms of $\pi$. Then round your answer to two decimal places.

Radius, $r = 6$ inches; Central angle, $\theta = 160^\circ$

$s = \underline{\\ \ }$ inches

(Simplify your answer. Type your answer in terms of $\pi$. Use integers or fractions for any numbers in the expression.)

$s = \underline{\\ \ }$ inches

(Type your answer rounded to two decimal places.)
5. Use the Pythagorean Theorem to find the length of the missing side of the right triangle. Then find the value of each of the six trigonometric functions of $\theta$. 

\[ a = 20 \]
\[ b = 21 \]
\[ c \]

The length of the missing side of the right triangle is $c = \boxed{22}$.

\[ \sin \theta = \boxed{\frac{20}{22}} \]
(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression.)

\[ \cos \theta = \boxed{\frac{21}{22}} \]
(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression.)

\[ \tan \theta = \boxed{\frac{20}{21}} \]
(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression.)

\[ \csc \theta = \boxed{\frac{22}{20}} \]
(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression.)

\[ \sec \theta = \boxed{\frac{22}{21}} \]
(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression.)

\[ \cot \theta = \boxed{\frac{21}{20}} \]
(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression.)
6. Use the given triangles to evaluate the following expression. If necessary, express the value without a square root in the denominator by rationalizing the denominator.

\[ \sin 45^\circ \]

\[ \sin 45^\circ = \square \]

(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression. Rationalize all denominators.)

7. Use identities to find the exact value of each of the four remaining trigonometric functions of the acute angle \( \theta \).

\[ \sin \theta = \frac{1}{4}, \quad \cos \theta = \frac{\sqrt{15}}{4} \]

\[ \tan \theta = \square \]

(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression.)

\[ \csc \theta = \square \]

(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression.)

\[ \sec \theta = \square \]

(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression.)

\[ \cot \theta = \square \]

(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression.)

8. Find a cofunction with the same value as the given expression.

\[ \cos \left( \frac{2\pi}{7} \right) \]

The answer is \[ \square \].

(Type an exact answer in terms of \( \pi \). Simplify your answer.)
9. If $\theta$ is an acute angle and $\sec \theta = \frac{6}{5}$, find $\csc \left(\frac{\pi}{2} - \theta\right)$. Do not use a calculator and express each exact value as a single fraction.

$$\csc \left(\frac{\pi}{2} - \theta\right) = \square$$

(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression.)

10. Find a cofunction with the same value as the given expression.

$$\tan 19^\circ$$

☐ A. $\sec 19^\circ$
☐ B. $\cot 19^\circ$
☐ C. $\cot 109^\circ$
☐ D. $\cot 71^\circ$

11. Use a calculator to find the value of the trigonometric expression to four decimal places.

$$\cos 47^\circ$$

$$\cos 47^\circ \approx \square$$

(Round your answer to four decimal places.)

12. Use a calculator to find the value of the trigonometric expression to four decimal places.

$$\sin \frac{7\pi}{15}$$

$$\sin \frac{7\pi}{15} \approx \square$$

(Round your answer to four decimal places.)
13. A tower that is 128 feet tall casts a shadow 150 feet long. Find the angle of elevation of the sun to the nearest degree.

The angle of elevation is \( \boxed{0} \) degrees. (Round to the nearest degree.)

14. A point on the terminal side of angle \( \theta \) is given. Find the exact value of each of the six trigonometric functions of \( \theta \).

\[
(-6, -5)
\]

\[\sin \theta = \boxed{0}\]
(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression. Rationalize all denominators.)

\[\cos \theta = \boxed{0}\]
(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression. Rationalize all denominators.)

\[\tan \theta = \boxed{0}\]
(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression. Rationalize all denominators.)

\[\csc \theta = \boxed{0}\]
(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression. Rationalize all denominators.)

\[\sec \theta = \boxed{0}\]
(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression. Rationalize all denominators.)

\[\cot \theta = \boxed{0}\]
(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression. Rationalize all denominators.)
15. Evaluate the trigonometric function at the quadrantal angle, or state that the expression is undefined.

\[
\tan \frac{3\pi}{2}
\]

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- \(\text{A. } \tan \frac{3\pi}{2} = \text{[ ]} \)
- \(\text{B. } \text{The expression is undefined.} \)

16. A point on the terminal side of angle \(\theta\) is given. Find the exact value of the indicated trigonometric function of \(\theta\).

\((5,3)\) Find \(\tan \theta\).

- \(\text{A. } \frac{5}{3} \)
- \(\text{B. } \frac{3}{5} \)
- \(\text{C. } \frac{5}{6} \)
- \(\text{D. } \frac{1}{2} \)

17. Let \(\theta\) be an angle in standard position. Name the quadrant in which \(\theta\) lies.

\(\cos \theta < 0, \csc \theta < 0\)

The angle \(\theta\) lies in which quadrant?

- \(\text{I} \)
- \(\text{II} \)
- \(\text{IV} \)
- \(\text{III} \)
18. Use the reference angle to find the exact value of the following expression. Do not use a calculator.

\( \sin 510^\circ \)

\( \sin 510^\circ = \boxed{} \).

(Type an exact answer, using radicals as needed. Rationalize all denominators. Simplify your answer. Use integers or fractions for any numbers in the expression.)

19. Use reference angles to find the exact value of the following expression. Do not use a calculator.

\( \csc \frac{7\pi}{4} \)

\( \csc \frac{7\pi}{4} = \boxed{} \).

(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression. Rationalize all denominators.)

20. Determine the amplitude of the following function. Then graph the function and \( y = \sin x \) in the same rectangular coordinate system for \( 0 \leq x \leq 2\pi \).

\( y = -4 \sin x \)

The amplitude is \boxed{}.

Determine which graph shows \( y = \sin x \) and \( y = -4 \sin x \). The graph of \( y = \sin x \) is represented by the red dashed curve, and \( y = -4 \sin x \) is represented by the solid blue curve.
21. Find the amplitude, period, and phase shift of the function. Graph the function. Show at least one period.

\[ y = 5 \sin (5x - \pi) \]

Type the amplitude, period, and phase shift of the function.

Amplitude = [ ]  Period = [ ]  Phase shift = [ ]

(Simplify your answer. Type an exact answer, using \( \pi \) as needed. Use integers or fractions for any numbers in the expression.)

Choose the correct graph of the function \( y = 5 \sin (5x - \pi) \).

22. Determine the amplitude or period as requested.

Amplitude of \( y = -\frac{1}{5} \sin x \)

\[ \text{A. } -\frac{1}{5} \]

\[ \text{B. } 5 \]

\[ \text{C. } \frac{1}{5} \]

\[ \text{D. } \frac{\pi}{5} \]
23. Determine the phase shift of the function.

\[ y = 2 \sin \left( x - \frac{\pi}{2} \right) \]

- A. \( \frac{\pi}{2} \) units to the right
- B. 2 units up
- C. 2 units down
- D. \( \frac{\pi}{2} \) units to the left

24. Determine the amplitude, period, and phase shift of the function. Then graph one period of the function.

\[ y = \frac{1}{3} \cos \left( 2x + \frac{\pi}{2} \right) \]

The amplitude is \( \square \).

The period is \( \square \).

(Type an exact answer, using \( \pi \) as needed. Use integers or fractions for any numbers in the expression.)

The phase shift is \( \square \).

(Type an exact answer, using \( \pi \) as needed. Use integers or fractions for any numbers in the expression.)

Choose the correct graph of the function \( y = \frac{1}{3} \cos \left( 2x + \frac{\pi}{2} \right) \).
Sample Content for Math 142 and MyMathTest Test 4: Trigonometry

25. Graph two periods of the given tangent function.

\[ y = -3 \tan \left( \frac{1}{3}x \right) \]

Choose the correct graph of two periods of \( y = -3 \tan \left( \frac{1}{3}x \right) \) below.

![Graph Options](image1)

26. Graph two periods of the given tangent function.

\[ y = \tan \left( x - \frac{\pi}{10} \right) \]

Choose the correct graph of two periods of \( y = \tan \left( x - \frac{\pi}{10} \right) \) below.

![Graph Options](image2)

27. Graph two periods of the given cotangent function.

\[ y = 3 \cot x \]

Choose the correct graph of two periods of \( y = 3 \cot x \) below.

![Graph Options](image3)
28. Use a graph to solve the given equation for \(-2\pi \leq x \leq 2\pi\).

\[ 10 \csc x = 10 \]

\[ x = \{\square\} \]

(Type an integer or a simplified fraction in terms of \(\pi\). Use a comma to separate answers as needed.)

29. Establish the identity.

\[ \sec \theta \cdot \sin \theta = \tan \theta \]

Which of the following four statements establishes the identity?

- **A.** \[ \sec \theta \cdot \sin \theta = \cos \theta \cdot \frac{\sin \theta}{\cos \theta} = \frac{\cos \theta}{\sin \theta} = \tan \theta \]
- **B.** \[ \sec \theta \cdot \sin \theta = \sin \theta \cdot \sec \theta = \frac{\cos \theta}{\sin \theta} = \tan \theta \]
- **C.** \[ \sec \theta \cdot \sin \theta = \frac{1}{\cos \theta} \cdot \sin \theta = \frac{\sin \theta}{\cos \theta} = \tan \theta \]
- **D.** \[ \sec \theta \cdot \sin \theta = \frac{1}{\cos \theta} \cdot \sec \theta = \frac{\sin \theta}{\cos \theta} = \tan \theta \]

30. Verify the identity.

\[ \sec x - \sec x \sin^2 x = \cos x \]

Choose the sequence of steps below that verifies the identity.

- **A.** \[ \sec x - \sec x \sin^2 x = \sec x(1 - \sin^2 x) = \frac{1}{\cos x} \cdot \cos^2 x = \cos x \]
- **B.** \[ \sec x - \sec x \sin^2 x = \sec x(\sin^2 x - 1) = \frac{1}{\cos x} \cdot \cos^2 x = \cos x \]
- **C.** \[ \sec x - \sec x \sin^2 x = \sec x(1 - \sin^2 x) = \frac{1}{\cos^2 x} \cdot \cos x = \cos x \]
- **D.** \[ \sec x - \sec x \sin^2 x = 1 - \sin^2 x = \cos x \]
31. Rewrite the expression in terms of the given function.

\[
\frac{\sec x - \csc x}{\cot x - 1} = \cos x
\]

32. Write the following expression as the sine, cosine, or tangent of a double angle. Then find the exact value of the expression.

\[2 \sin 30° \cos 30°\]

The expression written as the sine, cosine, or tangent of a double angle is \[\square \]°.
(Type any angle measures in degrees.)

What is the exact value?
\[\square \]
(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression.)

33. Use the half-angle formulas to find the exact value of the trigonometric function \(\tan \frac{5\pi}{12}\).

\[\tan \frac{5\pi}{12} = \square\]
(Type an exact answer using radicals as needed. Rationalize the denominator as needed.)

34. Use the given information to find the exact value of a. \(\sin \frac{\alpha}{2}\), b. \(\cos \frac{\alpha}{2}\), and c. \(\tan \frac{\alpha}{2}\).

\(\tan \alpha = \frac{8}{15}, \alpha \) lies in quadrant III

a. \(\sin \frac{\alpha}{2} = \square\)
(Type an exact answer, using radicals as needed. Simplify your answer.)

b. \(\cos \frac{\alpha}{2} = \square\)
(Type an exact answer, using radicals as needed. Simplify your answer.)

c. \(\tan \frac{\alpha}{2} = \square\)
(Type an exact answer, using radicals as needed. Simplify your answer.)
35. Find all solutions to the following equation:

\[
\tan x = \frac{\sqrt{3}}{3}
\]

The solution set is \( \{ \} \).

(Type your answer(s) in terms of \( n \). Use a comma to separate answers as needed.)

36. Solve the equation.

\[2 \sin^2 x + \sin x - 1 = 0\]

What is the solution in the interval \( 0 \leq x < 2\pi \)? Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

☐ A. The solution set is \( \{ \} \).

(Simplify your answer. Type an exact answer, using \( \pi \) as needed. Use integers or fractions for any numbers in the expression. Use a comma to separate answers as needed.)

☐ B. There is no solution.

37. Solve the equation on the interval \([0, 2\pi)\).

\[6 \cos^2 x - 3 = 0\]

What are the solutions in the interval \([0, 2\pi)\)?

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

☐ A. The solution set is \( \{ \} \).

(Type your answer in radians. Use integers or fractions for any numbers in the expression. Use a comma to separate answers as needed.)

☐ B. There is no solution.

38. Solve the following equation on the interval \([0, 2\pi)\).

\[\sin x + 2 \sin x \cos x = 0\]

The solution set is \( \{ \} \).

(Type an exact answer in terms of \( \pi \). Use a comma to separate answers as needed.)
39. Use an identity to solve the following equation on the interval \([0, 2\pi)\).

\[2 \cos^2 x + \sin x - 1 = 0\]

The solution set is \(\{\Box\}\).

(Type an exact answer in terms of \(\pi\). Use a comma to separate answers as needed.)

40. Use an identity to solve the following equation on the interval \([0, 2\pi)\).

\[\sin 2x = \sin x\]

The solution set is \(\{\Box\}\).

(Type an exact answer in terms of \(\pi\). Use a comma to separate answers as needed.)
1. $\frac{13\pi}{6}$

2. $-1980$

3. $\frac{5\pi}{4}$

4. $\frac{16\pi}{3} \approx 16.76$

5. $\frac{29}{20}$

6. $\frac{\sqrt{2}}{2}$

7. $\frac{\sqrt{15}}{4}$

8. $\sin \frac{3\pi}{14}$

9. $\frac{6}{5}$

10. $D$

11. 0.6820

12. 0.9945

13. 40

14. $\frac{5\sqrt{61}}{61}$

15. B

16. B

17. III

18. $\frac{1}{2}$

19. $-\sqrt{2}$

20. 4

21. $\frac{5}{2\pi}$

22. C

23. A

24. $\frac{1}{3}$

25. B

26. B

27. C

28. $\frac{\pi}{4} \cdot 2^\frac{\pi}{2}$

29. C

30. A

31. $\frac{1}{\cos x}$

32. $\sin 60 = \frac{\sqrt{3}}{2}$

33. $2 + \sqrt{3}$

34. $\frac{4\sqrt{17}}{17} - \frac{\sqrt{17}}{17} - 4$

35. $\frac{\pi}{6} + \pi n$

36. $\frac{\pi}{6}, \frac{5\pi}{6}, \frac{3\pi}{2}$

37. $\frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}$

38. 0, $\pi, \frac{2\pi}{3}, \frac{4\pi}{3}$

39. $\frac{7\pi}{6}, \frac{11\pi}{6}, \frac{\pi}{2}$

40. $\frac{\pi}{3}, \frac{5\pi}{3}, 0, \pi$
How to Use the Online Study Plan

You can access a free online Study Plan to brush up the math skills you have found that need attention by going to https://mymathtest.highline.edu/. You will need an activated MyHighline account (https://helpdesk.highline.edu/myHCC.php) in order to access practice questions. It can take up to an hour to get the MyMathTest account activated, so please be patient!

The chart on the next page shows which problems to practice in the Study Plan.

Once you are in MyMathTest, choose “Practice in the STUDY PLAN” on the left sidebar to access the Study Plan Sections. Then choose the chapter you want. The screen shot shows how to access Chapter 1.2 (Chapter 1, Section 2).

Click on the Chapter you want, selected the objective listed in the chart on the next page. You can access practice problems, watch videos, and take short quizzes on the concepts. The screen shot below shows the objectives for Chapter 1.2.
<table>
<thead>
<tr>
<th>Practice Packet Problems for Math&amp; 142 and MyMathTest Test 4</th>
<th>Related Study Plan Sections</th>
<th>Section Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Angles and Radian Measure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>21.1</td>
<td>Convert between degrees and radians</td>
</tr>
<tr>
<td>2</td>
<td>21.1</td>
<td>Convert between degrees and radians</td>
</tr>
<tr>
<td>3</td>
<td>21.1</td>
<td>Find coterminal angles</td>
</tr>
<tr>
<td>4</td>
<td>21.1</td>
<td>Find the length of a circular arc</td>
</tr>
<tr>
<td><strong>Right Triangle Trigonometry</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>21.2</td>
<td>Use right triangles to evaluate trigonometric functions</td>
</tr>
<tr>
<td>6</td>
<td>21.2</td>
<td>Find function values for 30°(pi/6), 45° (pi/4), and 60° (pi/3)</td>
</tr>
<tr>
<td>7</td>
<td>21.2</td>
<td>Recognize and use fundamental identities</td>
</tr>
<tr>
<td>8</td>
<td>21.2</td>
<td>Use equal cofunctions of complements</td>
</tr>
<tr>
<td>9</td>
<td>21.2</td>
<td>Use equal cofunctions of complements</td>
</tr>
<tr>
<td>10</td>
<td>21.2</td>
<td>Use equal cofunctions of complements</td>
</tr>
<tr>
<td>11</td>
<td>21.2</td>
<td>Evaluate trigonometric functions with a calculator</td>
</tr>
<tr>
<td>12</td>
<td>21.2</td>
<td>Evaluate trigonometric functions with a calculator</td>
</tr>
<tr>
<td>13</td>
<td>21.2</td>
<td>Use right triangle trigonometry to solve applied problems</td>
</tr>
<tr>
<td>Trigonometric Functions of Any Angle</td>
<td>21.3</td>
<td>Use the definitions of trigonometric functions of any angle</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graphs of Sine and Cosine Functions</td>
<td>21.4</td>
<td>Understand the graph of $y = \sin x$, and graph variations of $y = \sin x$.</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graphs of Other Trigonometric Functions</td>
<td>21.5</td>
<td>Understand the graph of $y = \tan x$, and graph variations of $y = \tan x$.</td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercise</td>
<td>Page</td>
<td>Section</td>
</tr>
<tr>
<td>----------</td>
<td>------</td>
<td>---------</td>
</tr>
<tr>
<td>29</td>
<td>21.6</td>
<td>Use the fundamental trigonometric identities to verify identities</td>
</tr>
<tr>
<td>30</td>
<td>21.6</td>
<td>Use the fundamental trigonometric identities to verify identities</td>
</tr>
<tr>
<td>31</td>
<td>21.6</td>
<td>Use the fundamental trigonometric identities to verify identities</td>
</tr>
</tbody>
</table>

**Double- and Half-Angle Formulas**

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td></td>
<td>Use the double-angle formulas</td>
</tr>
<tr>
<td>33</td>
<td></td>
<td>Use the half-angle formulas</td>
</tr>
<tr>
<td>34</td>
<td></td>
<td>Use the half-angle formulas</td>
</tr>
</tbody>
</table>

**Solving Trigonometric Equations**

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td></td>
<td>Find all solutions of a trigonometric equation</td>
</tr>
<tr>
<td>36</td>
<td></td>
<td>Solve trigonometric equations quadratic in form</td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>Solve trigonometric equations quadratic in form</td>
</tr>
<tr>
<td>38</td>
<td></td>
<td>Use factoring to separate different functions in trigonometric equations</td>
</tr>
<tr>
<td>39</td>
<td></td>
<td>Use identities to solve trigonometric equations</td>
</tr>
<tr>
<td>40</td>
<td></td>
<td>Use identities to solve trigonometric equations</td>
</tr>
</tbody>
</table>