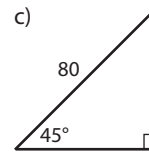
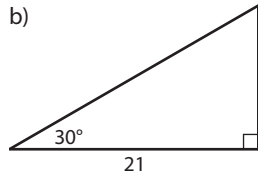
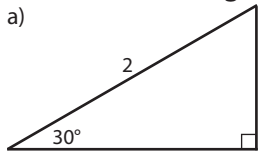


Name:

### 4-A Special Right Triangles

1. State each length in the diagram below.



### 4-B Trigonometric Functions in Right Triangles

2. State the value of each of the following trig functions for the triangle at right.

a)  $\cos A$

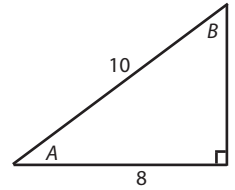
b)  $\sin B$

c)  $\tan A$

d)  $\sec A$

e)  $\cot B$

f)  $\csc A$



3. Calculate.

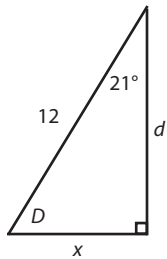
a)  $\sin 30^\circ$

b)  $\csc 30^\circ$

c)  $\csc 81^\circ$

4. Solve.

a) Find the lengths of  $d$  and  $x$ .



b) Find the height of a tree casting a 6.1-meter shadow when the sun is  $14^\circ$  above the horizon.

### 4-C Inverse Trigonometric Functions in Right Triangles

5. State the value of each of the following functions for the triangle at right, or write "n/a".

a)  $\sin A$

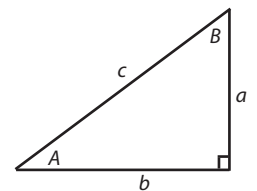
b)  $\sin^{-1} \frac{b}{c}$

c)  $\sin^{-1} \frac{c}{a}$

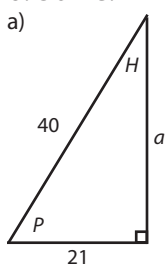
d)  $\sin^{-1} B$

e)  $\cos^{-1} \frac{b}{c}$

f)  $\tan^{-1} \frac{b}{a}$



6. Solve.



b) Find the steepness of a 90-meter road that rises 12 meters.