Using a Trig Table

Find the angle in the problem and then follow that across to the indicated trig function.

For $\sin 25^\circ$, look down the first column until you get to 25. Then go right to the sin column. This is the answer to $\sin 25^\circ$.

Find the following:

$\cos 78^\circ$ .2079

$\tan 28^\circ$ .5317

$\sin 52^\circ$ .7880

Table of Trigonometric Ratios

p. 8.21

Angle Measure	sin	cos	tan	Angle Measure	sin	cos	tan
0	0.000	10000	0.000	46	.7193	.6947	1.036
1	.0175	.9998	.0175	47	.7314	.6820	1.072
2	.0349	.9994	.0349	48	.7431	.6691	1.111
3	.0523	.9986	.0524	49	.7547	.6561	1.150
4	.0698	.9976	.0699	50	.7660	.6428	1.192
5	.0872	.9962	.0875	51	.7771	.6293	1.235
6	.1045	.9945	.1051	52	.7880	.6157	1.280
7	.1219	.9925	.1228	53	.7986	.6018	1.327
8	.1392	.9903	.1405	54	.8090	.5878	1.376
9	.1564	.9877	.1584	55	.8192	.5736	1.428
10	.1736	.9848	.1763	56	.8290	.5592	1.483
11	.1908	.9816	.1944	57	.8387	.5446	1.540
12	.2079	.9781	.2126	58	.8480	.5299	1.600
13	.2250	.9744	.2309	59	.8572	.5150	1.664
14	.2419	.9703	.2493	60	.8660	.5000	1.732
15	.2588	.9659	.2679	61	.8746	.4848	1.804
16	.2756	.9613	.2867	62	.8829	.4695	1.881
17	.2924	.9563	.3057	63	.8910	.4540	1.963
18	.3090	.9511	.3249	64	.8988	.4384	2.050
19	.3256	.9455	.3443	65	.9063	.4226	2.145
20	.3420	.9397	.3640	66	.9135	.4067	2.246
21	.3584	.9336	.3839	67	.9205	.3907	2.356
22	.3746	.9272	.4040	68	.9272	.3746	2.475
23	.3907	.9205	.4245	69	.9336	.3584	2.605
24	.4067	.9135	.4452	70	.9397	.3420	2.747
25	.4226	.9063	.4663	71	.9455	.3256	2.904
26	.4384	.8988	.4877	72	.9511	.3090	3.077
27	.4540	.8910	.5095	73	.9563	.2924	3.271
28	.4695	.8829	.5317	74	.9613	.2756	3.487
29	.4848	.8746	.5543	75	.9659	.2588	3.732
30	.5000	.8660	.5774	76	.9703	.2419	4.010
31	.5150	.8572	.6009	77	.9744	.2250	4.331
32	.5299	.8480	.6249	78	.9781	.2079	4.704
33	.5446	.8387	.6494	79	.9816	.1908	5.145
34	.5592	.8290	.6745	80	.9848	.1736	5.671
35	.5736	.8192	.7002	81	.9877	.1564	6.314
36	.5878	.8090	.7265	82	.9903	.1392	7.115
37	.6018	.7986	.7536	83	.9925	.1219	8.144
38	.6157	.7880	.7813	84	.9945	.1045	9.514
39	.6293	.7771	.8098	85	.9962	.0872	11.73
40	.6428	.7660	.8391	86	.9976	.0698	14.30
41	.6561	.7547	.8693	87	.9986	.0523	19.08
42	.6691	.7431	.9004	88	.9994	.0349	28.64
43	.6820	.7314	.9325	89	.9998	.0175	57.29
44	.6947	.7193	.9657	90	1.000	0.000	undefined
45	.7071	.7071	1.000				

Using a Trig Table

Find the ratio (decimal) in the problem and then find that down the indicated trig function's column. Then find the angle to the left that corresponds to that ratio.

For $\sin\theta = .4384$, look down the sin column until you get to .4384 or whatever decimal is closest to that.
Then go left to the angle column. This is the answer to $\sin\theta = .4384$.

Find the following angles:

$\cos x = .1390$ 82°

$\tan x = 1.8042$ 61°

$\sin x = .2920$ 17°

Table of Trigonometric Ratios

Angle Measure	sin	cos	tan	Angle Measure	sin	cos	tan
0	0.000	10000	0.000	46	.7193	.6947	1.036
1	.0175	.9998	.0175	47	.7314	.6820	1.072
2	.0349	.9994	.0349	48	.7431	.6691	1.111
3	.0523	.9986	.0524	49	.7547	.6561	1.150
4	.0698	.9976	.0699	50	.7660	.6428	1.192
5	.0872	.9962	.0875	51	.7771	.6293	1.235
6	.1045	.9945	.1051	52	.7880	.6157	1.280
7	.1219	.9925	.1228	53	.7986	.6018	1.327
8	.1392	.9903	.1405	54	.8090	.5878	1.376
9	.1564	.9877	.1584	55	.8192	.5736	1.428
10	.1736	.9848	.1763	56	.8290	.5592	1.483
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12	.2079	.9781	.2126	58	.8480	.5299	1.600
13	.2250	.9744	.2309	59	.8572	.5150	1.664
14	.2419	.9703	.2493	60	.8660	.5000	1.732
15	.2588	.9659	.2679	61	.8746	.4848	1.804
16	.2756	.9613	.2867	62	.8829	.4695	1.881
17	.2924	.9563	.3057	63	.8910	.4540	1.963
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21	.3584	.9336	.3839	67	.9205	.3907	2.356
22	.3746	.9272	.4040	68	.9272	.3746	2.475
23	.3907	.9205	.4245	69	.9336	.3584	2.605
24	.4067	.9135	.4452	70	.9397	.3420	2.747
25	.4226	.9063	.4663	71	.9455	.3256	2.904
26	.4384	.8988	.4877	72	.9511	.3090	3.077
27	.4540	.8910	.5095	73	.9563	.2924	3.271
28	.4695	.8829	.5317	74	.9613	.2756	3.487
29	.4848	.8746	.5543	75	.9659	.2588	3.732
30	.5000	.8660	.5774	76	.9703	.2419	4.010
31	.5150	.8572	.6009	77	.9744	.2250	4.331
32	.5299	.8480	.6249	78	.9781	.2079	4.704
33	.5446	.8387	.6494	79	.9816	.1908	5.145
34	.5592	.8290	.6745	80	.9848	.1736	5.671
35	.5736	.8192	.7002	81	.9877	.1564	6.314
36	.5878	.8090	.7265	82	.9903	.1392	7.115
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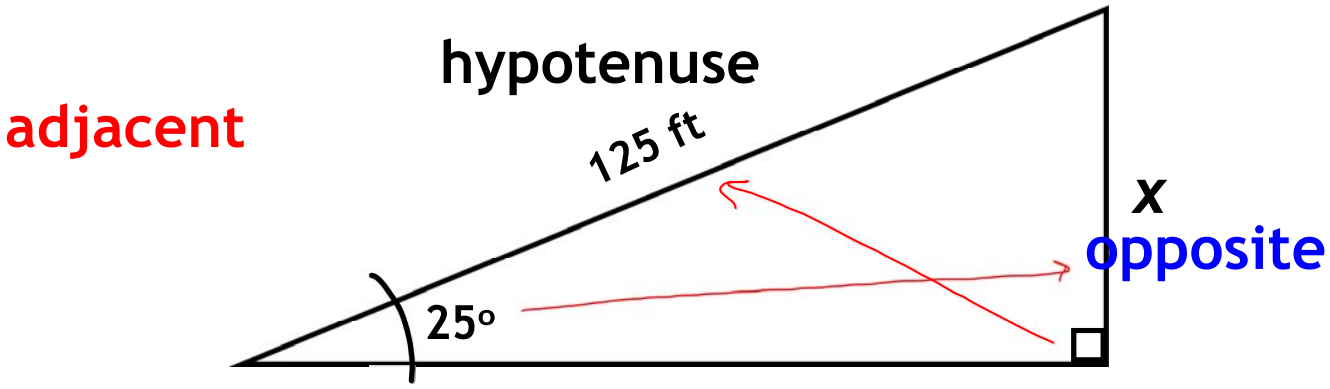
42	.6691	.7431	.9004	88	.9994	.0349	28.64
43	.6820	.7314	.9325	89	.9998	.0175	57.29
44	.6947	.7193	.9657	90	1.000	0.000	undefined
45	.7071	.7071	1.000				

Looking from the 25 degree angle, identify the sides that are labeled.
Not all of the labels will be used.



What trig function goes with those two sides? Sine

You teacher will help you write a trig equation and solve it for x.

$\sin 25^\circ = \frac{x}{125}$

mult. both sides by 125

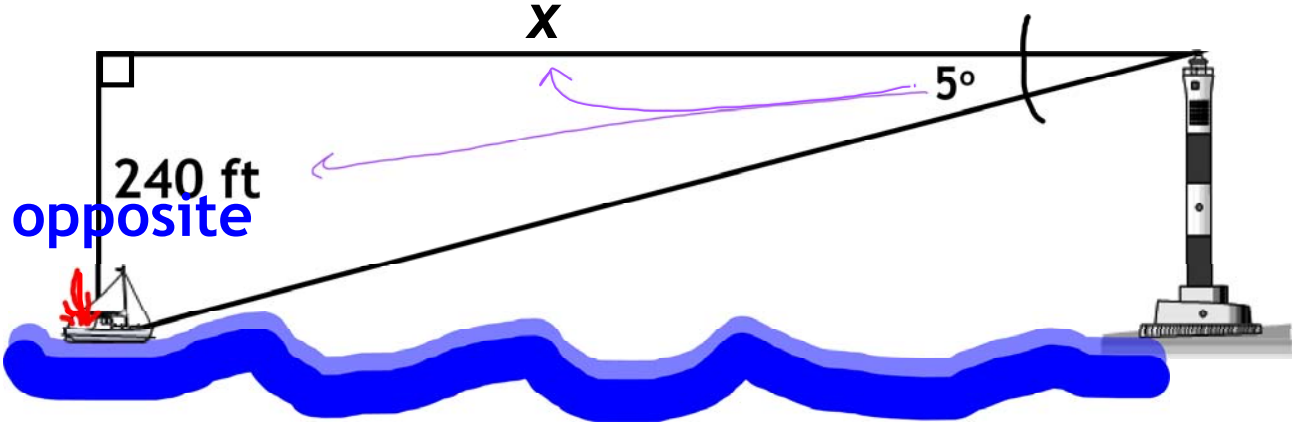
$125 \cdot \sin 25^\circ = x$

use your calculator or trig table

$x \approx 52.8$ ft.

adjacent

x



opposite

Looking from the 5 degree angle, identify the sides that are labeled.
Not all of the labels will be used.

What trig function goes with those two sides? tangent

hypotenuse

You teacher will help you write a trig equation and solve it for x.

$\tan 5^\circ = \frac{240}{x}$

mult. both sides by x.

$x \tan 5^\circ = 240$

Divide both sides by $\tan 5^\circ$

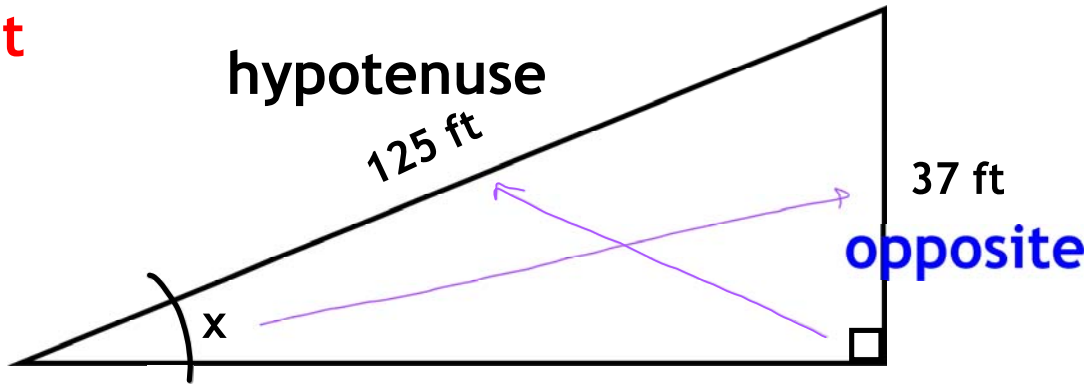
$x = \frac{240}{\tan 5^\circ}$

Use calculator and/or trig table

$x \approx 2743.2$ ft.

Looking from the x degree angle, identify the sides that are labeled.
Not all of the labels will be used.

adjacent



What trig function goes with those two sides? sine

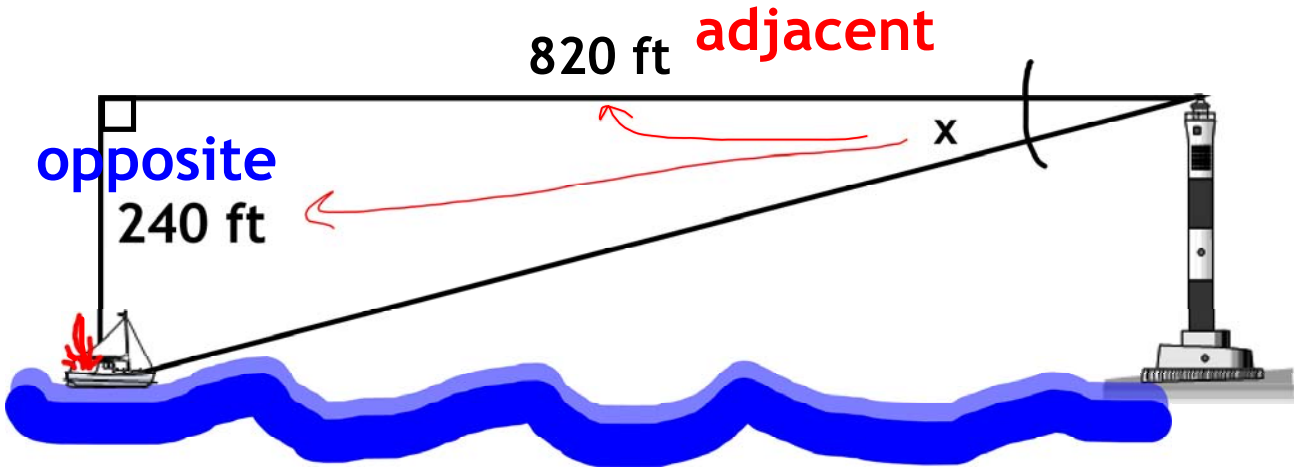
You teacher will help you write a trig equation and solve it for x.

$$\sin x = \frac{37}{125}$$

$$\sin x = .296$$

$$x = \sin^{-1}(.296)$$

$$x \approx 17^{\circ}$$



Looking from the x degree angle, identify the sides that are labeled.
Not all of the labels will be used.

What trig function goes with those two sides? tangent

hypotenuse

You teacher will help you write a trig equation and solve it for x.

$$\tan x = \frac{240}{820}$$

$$\tan x = .2926\ldots$$

$$x = \tan^{-1}(.2926\ldots)$$

$$x \approx 16^\circ$$