2.5.1: Going the Wrong Way

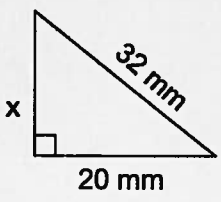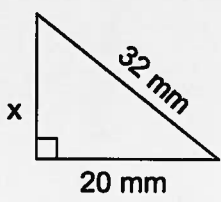There are two problems shown below. For each problem, the answer provided is incorrect. Partner A will identify the errors in the given solutions. Partner B will write a correct solution to the problem.

Partner A	Partner B
Solve for the missing side labelled x.	Solve for the missing side labelled x.

Partner A:

Solve for the missing side labelled x.

opposite   61°   hypotenuse   52 mm   x   adjacent

$$\cos 61° = \frac{52}{x}$$

$$\frac{0.485}{1} = \frac{52}{x}$$

$$x = \frac{52}{0.485}$$

$$x = 107.2$$

Partner B:

Solve for the missing side labelled x.

61°   52 mm   x

Partner A — Solve for the missing side x.

x   32 mm   20 mm

$$x^2 = 20^2 + 32^2$$

$$x^2 = 1424$$

$$x = \sqrt{1424}$$

$$x = 37.74$$
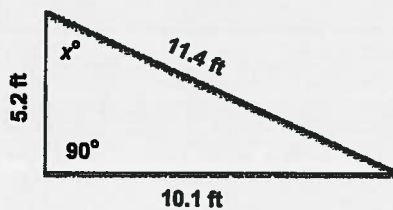
Partner B — Solve for the missing side x.

x   32 mm   20 mm

Action!

In partners solve for _x_. Try and find more than one way to solve the problem.

```
         x cm  ╱|
              ╱ |
             ╱  |
            ╱   | 90°        38°
           ╱____|_____
               7.9 cm
```
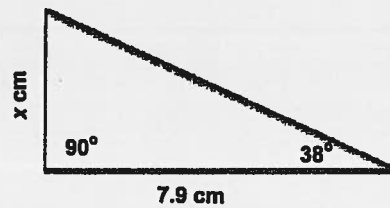
Action Page 1

In partners solve for _x_. Try and find more than one way to solve the problem.

```
      x°  ╱|
         ╱ | 11.4 ft
   5.2 ft │  ╲
         │   ╲
         │ 90° ╲
         │_____╲
          10.1 ft
```

Action Page 2

1

In partners solve for *x*. Try and find more than one way to solve the problem.

$x°$

5.2 ft

11.4 ft

90°

10.1 ft
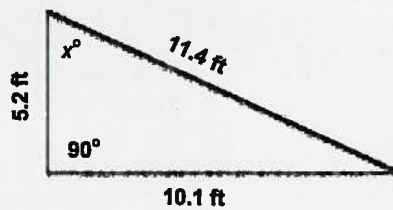
Action Page 2

In partners solve for *x*. Try and find more than one way to solve the problem.
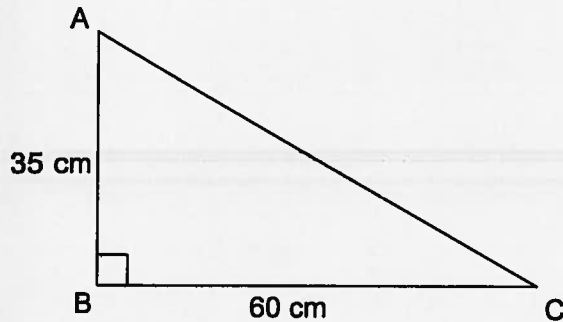
71°

1000 km

90°

x km
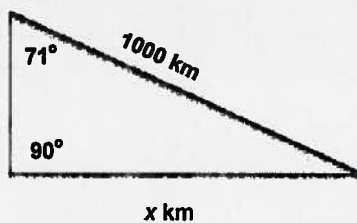
Action Page 3

2.5.2: Tangent or Something else

1. Decide whether to the use tangent ratio or the Pythagorean relationship to find *x*. Solve for *x*.
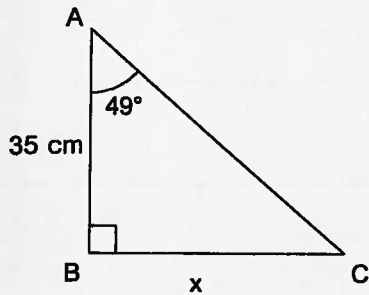
2. Decide whether to use the tangent ratio or the Pythagorean relation to find ∠A. Solve for ∠A.
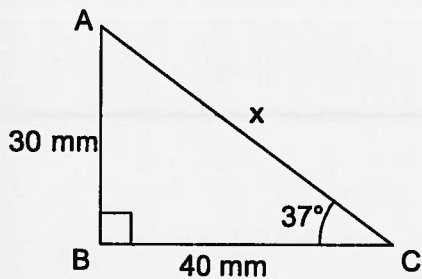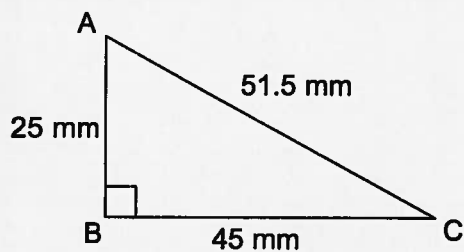

3. Decide whether to the use tangent ratio or the Pythagorean relationship to find *x*. Solve for *x*.

4. Decide whether to use the tangent ratio or the Pythagorean relation to find ∠C. Solve for ∠C.

Consolidate Debrief

In partners, come up with an example of a question that you need to use the SIN ratio to solve, an example of a question you need to use the COS ratio to solve and an example of a question you need to use the TAN ratio to solve.

→ When Done Pg 88 # 5, 6   Pg 89 # 9, 10, 13, 15