Practise: The Sine and Cosine Ratios

1. Use a scientific calculator to find each value. Round to four decimal places.

   a) cos 75° __0.2588__   b) sin 12° __0.2079__   c) sin 53° __0.7986__

   d) cos 8° __0.9902__   e) sin 66° __0.9135__   f) cos 81° __0.1564__

2. Use a scientific calculator to find the angle measure in each of the following. Round to the nearest degree.

   a) sin X = 0.1636 __9°__   b) sin A = 0.9386 __70°__   c) cos Y = 0.2232 __77°__

   d) cos F = 0.5867 __54°__   e) sin B = 0.4587 __27°__   f) cos K = 0.6892 __46°__
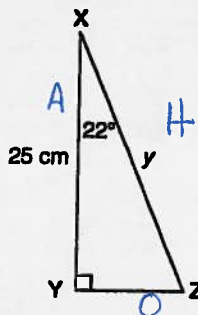
3. In the following right triangles, find the measure of the indicated side. Round to the nearest centimetre.
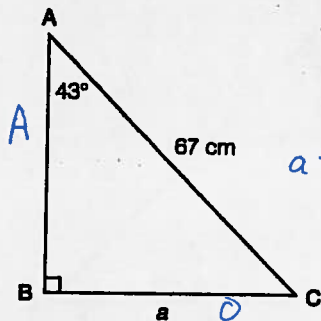
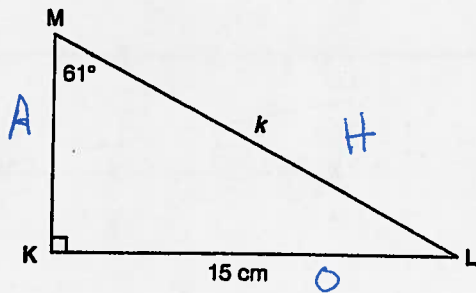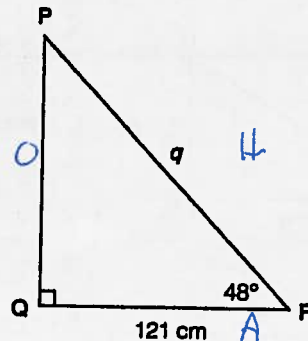$$\frac{a}{67} = \sin 43$$

$$a = (\sin 43)(67)$$

a) a = __46 cm__

$$\cos 22 = \frac{y}{25}$$

$$y = \frac{25}{\cos 22}$$

b) y = __27°__

c) k = __17 cm__

d) q = __180 cm__

no A

$$\sin 61 = \frac{15}{k}$$

$$k = \frac{15}{\sin 61} =$$

$$\cos 48 = \frac{121}{a}$$

$$a = \frac{121}{\cos 48}$$

Practise: The Tangent Ratio

1. Find each value. Round to four decimal places.

    a) tan 22.4° ___0.4121___

    b) tan 75° ___3.7321___

    c) tan 12° ___0.2125___

    d) tan 45° ___1.0000___

2. Find each angle measure. Round to the nearest degree.

    a) tan A = 0.6375 ___33°___

    b) tan B = 2.6758 ___70°___

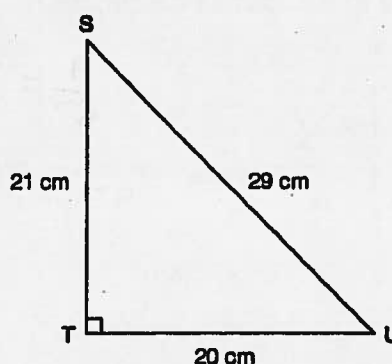   c) tan C = 1.1111 ___48°___

    d) tan D = 0.3353 ___19°___

3. Calculate the measure of ∠S to the nearest degree, using a scientific calculator.
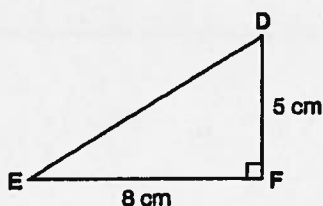
    The opposite side relative to ∠S is ___20cm___ cm.

    The adjacent side relative to ∠S is ___21___ cm.
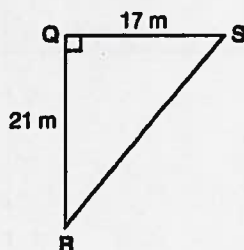
    $\tan S = \dfrac{20}{21}$

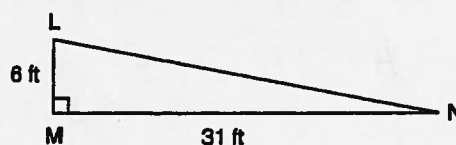   ∠S = ___43.6 ⊂ 44°___

4. Write the tangent ratio for the indicated angle in each triangle shown below. Write your answers as fractions in lowest terms.

    a) $\tan D = \dfrac{8}{5}$

    b) $\tan R = \dfrac{17}{21}$

    c) $\tan N = \dfrac{6}{31}$