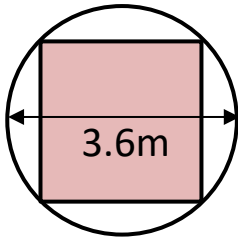
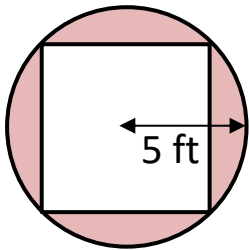
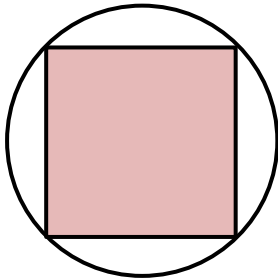
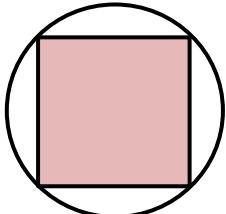




AREA OF A SQUARE INSCRIBED BY A CIRCLE 3

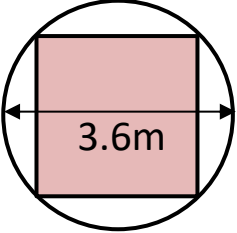
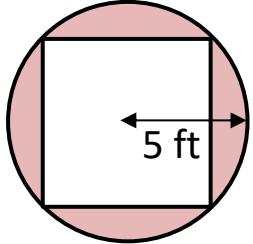
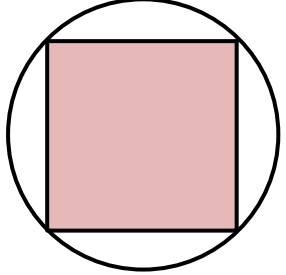
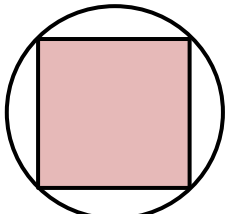
Find the area of these squares. Give your answers to 2dp where appropriate.

<p>1) Find the area of the square</p> 	
<p>2) Find the area of the shaded part of the circle.</p> 	
<p>3) Find the area of the square if the circumference of the circle is 32π cm.</p> 	
<p>4) Find the area of the square if the area of the whole circle is 225π cm².</p> 	



AREA OF A SQUARE INSCRIBED BY A CIRCLE 3 ANSWERS

Find the area of these squares. Give your answers to 2dp where appropriate.

<p>1) Find the area of the square</p> 	<p>The diameter of the circle is 3.6m. So the radius of the circle is $3.6 \div 2 = 1.8$ m. The area of the square is: $2r^2 = 2 \times (1.8)^2 = 2 \times 3.24 = \underline{6.48 \text{ m}^2}$</p>
<p>2) Find the area of the shaded part of the circle.</p> 	<p>Area of the shaded part of the circle = area of circle – area of square. Area of circle = $\pi r^2 = \pi \times 5^2 = 25\pi$ sq. ft Area of square = $2r^2 = 2 \times 5^2 = 2 \times 25 = 50$ sq. ft Area of shaded part of circle = $25\pi - 50$ sq. ft = <u>28.54 sq. ft</u> (to 2dp)</p>
<p>3) Find the area of the square if the circumference of the circle is 32π cm.</p> 	<p>Circumference of circle = $2\pi r$ cm = 32π cm. So $2\pi r = 32\pi$ $\pi r = 16\pi$ $r = 16\pi \div \pi = 16$ cm. Area of square = $2r^2 = 2 \times (16)^2 = 2 \times 256$ = <u>512 cm²</u></p>
<p>4) Find the area of the square if the area of the whole circle is 225π cm².</p> 	<p>Area of circle = $\pi r^2 = 225\pi$ cm² So $\pi r^2 = 225\pi$ $r^2 = 225\pi \div \pi = 225$. So $r = 15$ cm. Area of square = $2r^2 = 2 \times (15)^2 = 2 \times 225$ = <u>450 cm²</u></p>