Exercise 7A

1 a $\frac{\pi}{20} \times \frac{180°}{\pi} = 9°$

b $\frac{\pi}{15} \times \frac{180°}{\pi} = 12°$

c $\frac{5\pi}{12} \times \frac{180}{\pi} = 75°$

d $\frac{\pi}{2} \times \frac{180°}{\pi} = 90°$

e $\frac{7\pi}{9} \times \frac{180°}{\pi} = 140°$

f $\frac{7\pi}{6} \times \frac{180°}{\pi} = 210°$

g $\frac{5\pi}{4} \times \frac{180°}{\pi} = 225°$

h $\frac{3\pi}{2} \times \frac{180°}{\pi} = 270°$

i $3\pi \times \frac{180°}{\pi} = 540°$

2 a $0.46 \times \frac{180}{\pi} = 26.4°$

b $1 \times \frac{180}{\pi} = 57.3°$

c $1.135 \times \frac{180}{\pi} = 65.0°$

d $\sqrt{3} \times \frac{180}{\pi} = 99.2°$

e $2.5 \times \frac{180°}{\pi} = 143.2°$

f $3.14 \times \frac{180°}{\pi} = 179.9°$

g $3.49 \times \frac{180°}{\pi} = 200.0°$

3 a $\sin 0.5^c = 0.479$

b $\cos \sqrt{2}^c = 0.156$

c $\tan 1.05^c = 1.74$

d $\sin 2^c = 0.909$

e $\cos 3.6^c = -0.897$

4 a $8 \times \frac{\pi}{180} = \frac{2\pi}{45}$

b $10 \times \frac{\pi}{180} = \frac{\pi}{18}$

c $22.5 \times \frac{\pi}{180} = \frac{\pi}{8}$

d $30 \times \frac{\pi}{180} = \frac{\pi}{6}$

e $45 \times \frac{\pi}{180} = \frac{\pi}{4}$

f $60 \times \frac{\pi}{180} = \frac{\pi}{3}$

g $75 \times \frac{\pi}{180} = \frac{5\pi}{12}$

h $80 \times \frac{\pi}{180} = \frac{4\pi}{9}$

i $112.5 \times \frac{\pi}{180} = \frac{5\pi}{8}$

j $120 \times \frac{\pi}{180} = \frac{2\pi}{3}$

k $135 \times \frac{\pi}{180} = \frac{3\pi}{4}$

l $200 \times \frac{\pi}{180} = \frac{10\pi}{9}$

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m $240 \times \frac{\pi}{180} = \frac{4\pi}{3}$

n $270 \times \frac{\pi}{180} = \frac{3\pi}{2}$

o $315 \times \frac{\pi}{180} = \frac{7\pi}{4}$

p $330 \times \frac{\pi}{180} = \frac{11\pi}{6}$

5 **a** $50 \times \frac{\pi}{180} = 0.873\,\text{rad}$

b $75 \times \frac{\pi}{180} = 1.31\,\text{rad}$

c $100 \times \frac{\pi}{180} = 1.75\,\text{rad}$

d $160 \times \frac{\pi}{180} = 2.79\,\text{rad}$

e $230 \times \frac{\pi}{180} = 4.01\,\text{rad}$

f $320 \times \frac{\pi}{180} = 5.59\,\text{rad}$

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