1. (**1**) **i.** S

    ii. G

    iii. A

    iv. L

    v. J

    vi. D

    vii. O

    viii. K

(**2**) **i.** $370.19

    ii. $374.60

    iii. $376.91

    iv. $378.49

    v. $379.30

(**3**)

$$99° \quad 18° \quad 0° \quad 414° \quad 200° \quad 405° \quad 360° \quad 3600°$$

(**4**)

$$\pi \quad -\frac{\pi}{3} \quad -\frac{\pi}{4} \quad \frac{11\pi}{10} \quad 3\pi \quad -\frac{4\pi}{5} \quad -\frac{6\pi}{5} \quad -11\pi$$

(**5**) **i.** 10

    ii. 1

    iii. -3

    iv. 6

    v. -4

    vi. 1

    vii. -2

    viii. $\dfrac{1}{3}$

(**6**) The graph of $y = \cos x$ is dashed; the graph of $y_1 = 2\cos\dfrac{x}{2}$ is solid.
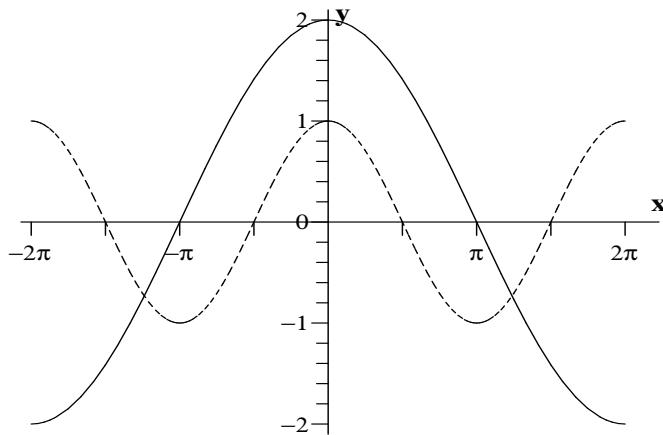
2. (**1**) **i.** O

  ii. G

  iii. Q

  iv. A

  v. K

  vi. E

  vii. D

  viii. M

(**2**) i. $126.25

 ii. $126.68

  iii. $126.90

  iv. $127.05

  v. $127.12

(**3**)

$$72° \quad -252° \quad -270° \quad -360° \quad -180° \quad -192° \quad -440° \quad 40°$$

(**4**)

$$-\frac{6\pi}{5} \quad \frac{5\pi}{3} \quad -\frac{2\pi}{3} \quad 3\pi \quad \pi \quad \frac{6\pi}{5} \quad \frac{7\pi}{3} \quad -\frac{2\pi}{9}$$

(**5**) i. 18

  ii. 3

  iii. -1

  iv. 3

  v. -1

  vi. 8

  vii. -20

  viii. $\dfrac{1}{3}$

(**6**) The graph of $y = \cos x$ is dashed; the graph of $y_1 = 2\cos x$ is solid.
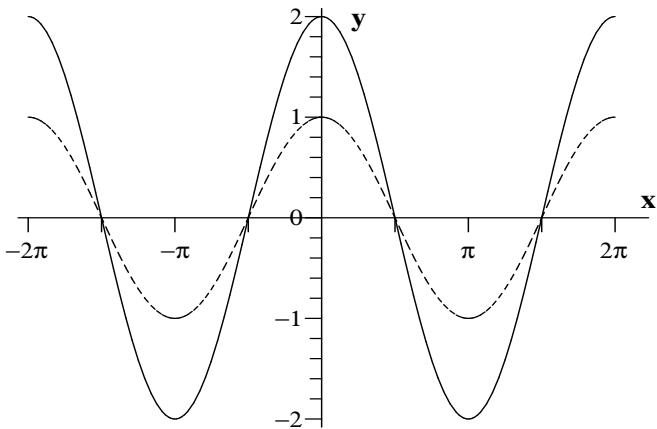
3. (**1**) i. N

   ii. F

   iii. P

   iv. R

   v. S

      vi. T

     vii. I

    viii. L

(**2**)   **i**. $615.45

    ii. $621.19

   iii. $624.20

   iv. $626.27

    v. $627.32

(**3**)

$$-720° \quad 2880° \quad -60° \quad 0° \quad -396° \quad 0° \quad 81° \quad 96°$$

(**4**)

$$\frac{11\pi}{5} \quad \frac{3\pi}{4} \quad \frac{8\pi}{9} \quad -\frac{8\pi}{9} \quad -\frac{4\pi}{3} \quad -10\pi \quad 4\pi \quad \frac{2\pi}{15}$$

(**5**)   **i**. 18

    ii. 2

   iii. -1

   iv. 3

    v. -5

   vi. -6

   vii. -18

  viii. $\dfrac{1}{2}$

(**6**) The graph of $y = \cos x$ is dashed; the graph of $y_1 = 2\cos(2x)$ is solid.
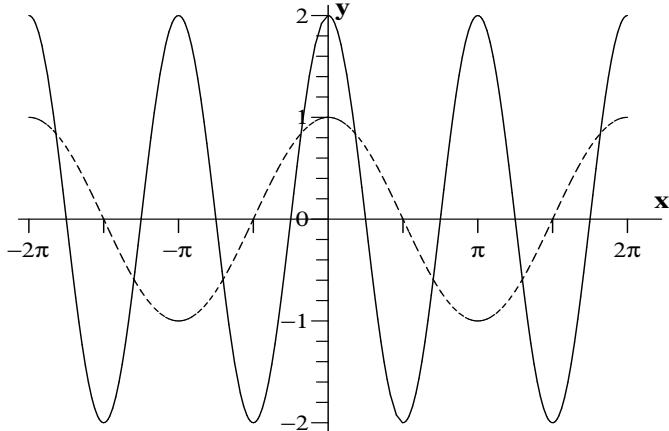
4. (**1**)   **i**. A

    ii. E

   iii. S

   iv. C

    v. B

   vi. T

   vii. M

  viii. G

(**2**)   **i**. $564.63

    ii. $568.84

    iii. $571.05

    iv. $572.56

    v. $573.33

(**3**)

$$0° \quad 252° \quad -2520° \quad -120° \quad 27° \quad 27° \quad -360° \quad 216°$$

(**4**)

$$\frac{13\pi}{10} \quad 23\pi \quad -\frac{3\pi}{2} \quad -\frac{11\pi}{9} \quad -\frac{13\pi}{5} \quad \frac{16\pi}{15} \quad -\frac{7\pi}{15} \quad -\frac{11\pi}{5}$$

(**5**)   **i.** 15

    ii. 3

   iii. -3

   iv. 3

    v. -5

   vi. 1

  vii. -1

 viii. $\dfrac{1}{3}$

(**6**) The graph of $y = \sin x$ is dashed; the graph of $y_1 = 2\sin(2x)$ is solid.
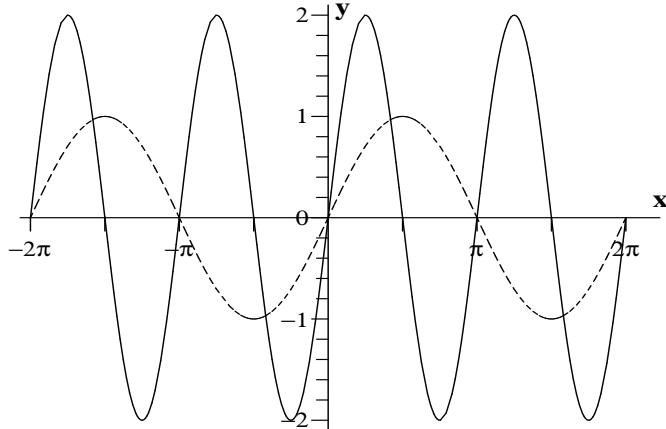
5. (**1**)   **i.** F

    ii. Q

   iii. N

   iv. I

    v. K

   vi. E

  vii. S

 viii. L

(**2**)   **i.** $218.00

    ii. $218.40

   iii. $218.62

   iv. $218.76

    v. $218.83

(**3**)

$$-180° \quad -81° \quad -450° \quad 480° \quad -216° \quad -140° \quad 300° \quad -90°$$

(**4**)

$$-\frac{\pi}{2} \quad -22\pi \quad -\frac{\pi}{2} \quad -\frac{\pi}{10} \quad 6\pi \quad -19\pi \quad -\frac{\pi}{2} \quad -\frac{13\pi}{9}$$

(**5**)   **i**. 19
   ii. 3
  iii. -2
   iv. 2
    v. -5
   vi. 3
  vii. -12
 viii. $\dfrac{1}{3}$

(**6**) The graph of $y = \sin x$ is dashed; the graph of $y_1 = \dfrac{1}{2} \sin x$ is solid.