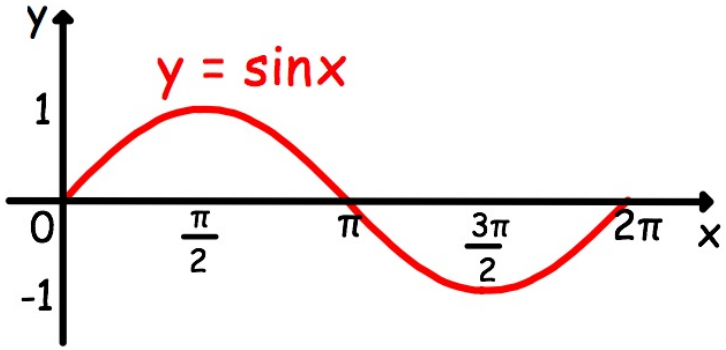
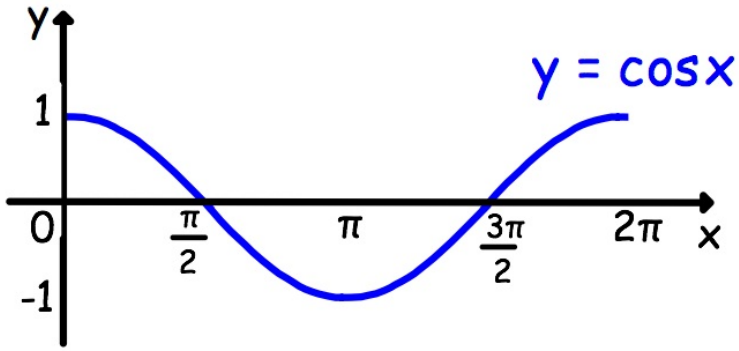
EXERCISE: TRIG. EXPRESSIONS

Find the maximum and minimum values and the corresponding values of x.





For $0 \leq x \leq 2\pi$

(1) $2\sin x + 5$

(2) $8 + 3\cos x$

(3) $10 - 4\sin x$

(4) $12 - 8\cos x$

(5) $\sin x - 1$

(6) $1 - \cos x$

(7) $3 + 5\sin 2x$, $0 \le x \le \pi$

(8) $10 + 6\cos 2x$, $0 \le x \le \pi$

(9) $4\sin 3x - 1$, $0 \le x \le {}^{2\pi}/_{3}$

(10) $5 + \cos 100x$, $0 \le x \le {}^{\pi}/_{50}$

(11) $7 - 2\sin 4x$, $0 \le x \le {}^{\pi}/_{2}$

(12) $9 - 5\cos 3x$, $0 \le x \le {}^{2\pi}/_{3}$

(13) $\sin 10x - 4$, $0 \le x \le {}^{\pi}/_{5}$

(14) $5\cos(x - {}^{\pi}/_{8})$, $0 \le x \le 2\pi$

(15) $3\sin(x - {}^{\pi}/_{6})$, $0 \le x \le 2\pi$

(16) $8\cos(x + {}^{\pi}/_{3})$, $0 \le x \le 2\pi$

(17) $6\sin(2x - {}^{\pi}/_{4})$, $0 \le x \le \pi$

(18) $2\cos(4x - {}^{\pi}/_{2})$, $0 \le x \le {}^{\pi}/_{2}$

(19) $8 + 5\sin(6x + {}^{\pi}/_{2})$, $0 \le x \le {}^{\pi}/_{3}$

(20) $5 + 2\cos(3x - {}^{\pi}/_{6})$, $0 \le x \le {}^{2\pi}/_{3}$