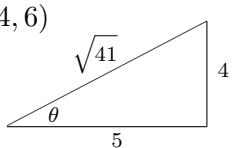




Algebra & Functions (Maths 201–016)

Answers

1. (a) 0 (b) 2 (c) \sqrt{x} (d) there are none
2. (a) a function (b) not a function (c) not a function (d) a function
3. (a) $[-5, 6]$ (b) $[-3, 5]$ (c) $(-1, 0), (2, 0), (4, 0), (6, 0); (0, -2)$ (d) $(-5, -1) \cup (4, 6)$
(e) $(-1, 2) \cup (2, 4)$ (f) Min: $(-4, 1), (0, -2), (3, -3)$; Max: $(-3, 4), (2, 0), (5, 3)$
4. $\sin \theta = \frac{4}{\sqrt{41}}$, $\cos \theta = \frac{5}{\sqrt{41}}$, $\sec \theta = \frac{\sqrt{41}}{5}$, $\csc \theta = \frac{\sqrt{41}}{4}$, $\cot \theta = \frac{5}{4}$ The triangle:

Note that $0.8 = \frac{8}{10} = \frac{4}{5}$ (!)
5. The base: 2; the hypotenuse: 4.
6. (a) -3 (b) 21 (c) 4
7. (a) 45° (b) 2, 4 (c) 8 (not -2) (d) $\frac{1}{27}$ (e) $7/5$ (f) -1