

Source:

#source openstax calculus volume 1 section 2.4 exercises

1 | 131

$$x \leq 0 \implies \boxed{\text{infinite}}$$

2 | 132**no discontinuities****3 | 140**

$$\boxed{\text{Infinite discontinuity}} \frac{-1}{0}$$

4 | 141

$$\boxed{\text{Continuous}} \left(\frac{(2u-1)(3u+2)}{2u-1} \right)$$

5 | 145

$$3x + 2 = 2x - 3 \implies \boxed{x = -5}$$

6 | 150**The function is not continuous at $x = 2$** **7 | 152****7.1 | a**

$$\cos t = t^3$$

7.2 | bLet $f(x) = \cos x$ and $g(x) = x^3$. For $a = 0$ and $b = \frac{\pi}{2}$:

$$f(a) = g(a) = 0 \neq f(b) = (\cos t)^{\frac{1}{3}}$$