

McV4U - Unit 2 Practice  
Test Answers:

KU 1)  $x = -2, -1, 0, 2$

2) At  $x = 0$

3) a)  $f(1) < 0$  b)  $f'(3) < 0$  c)  $f'(0.5) < 0$  d)  $f''(1) > 0$

4) If  $f(x) = g(x) \cdot h(x)$

then  $f'(x) = g'(x)h(x) + g(x)h'(x)$

5) -30

6) 37

7)  $f(x) = 2x^3$   $a = 3$

8) a)

$$\frac{1}{5}(5x^5 - 3x)^{-4/5} (15x^4 - 3)(5 - 4x)^3 + (5x^5 - 3x)^{1/5} \cdot 3(5 - 4x)^2 \cdot (-4)$$

b)

$$(6 - 2x)(1 - 3x)^{-1/2} + (6x - x^2) \left(-\frac{1}{2}\right) (1 - 3x)^{-3/2} \cdot (-3)$$

c)

$$\frac{(7(x^4 - 5)^6 4x^3 (6x^2 - 3)(5x + 3)^8 - (x^4 - 5)^7 [(12x)(5x + 3)^8 + (6x^2 - 3) \cdot 8(5x + 3)^7 (5)])}{[(6x^2 - 3)(5x + 3)^8]^2}$$

9) Proof

10)  $y = 24x - 48$

APPS

1) a) 16m b) 9m/s c) 3s d) 37m e) 6.5s

2) a)  $R(x) = 600x - 0.001x^2$

b) \$100/player

c) \$600

d) 56 913 000

e) \$-22/player

COMM 18) a)  $x \geq 3$  b)  $x \neq 3$  c)  $x \neq 3$

TIPS

1)  $y = -2x + 20$ ,  $y = 18x$

2)  $F(x) = x^4 + 2x + 3$