in the complicated expression?

A sin and cos functions

B sos, squaring, multiplication and addition

C cos, sin, squaring, multiplication and addition

D log, cos, sin, squaring, multiplication and addition

EXERCISE 7

Consider the expression x*sin(y) involving variables x and y. Use D() to compute several derivative functions: the partial with respect to x, the partial with respect to y, the second partial derivative with respect to x, the second partial

derivative with respect to y, and these two mixed partials:

```
pxy = D(x*sin(y) ~ x&y)
pyx = D(x*sin(y) ~ y&x)
```

Pick several (x, y) pairs and evaluate each of the derivative functions at them. Use the results to answer the following:

- The partials with respect to x and to y are identical. TRUE or FALSE

- The second partials with respect to x and to y are identical. TRUE or FALSE

- The two mixed partials are identical. That is, it doesn't matter whether you differentiate first with respect to x and then y, or vice versa. TRUE or FALSE