

1. Find

$$\int \frac{x^{\frac{1}{2}}(2x-5)}{3} dx$$

writing each term in simplest form.

(4)

$$= \int \frac{2x^{\frac{1}{2}+1} - 5x^{\frac{1}{2}}}{3}$$

$$= \int \frac{2x^{\frac{3}{2}} - 5x^{\frac{1}{2}}}{3}$$

$$= \int \frac{2x^{\frac{3}{2}}}{3} - \frac{5x^{\frac{1}{2}}}{3}$$

$$= \left(\frac{2}{3}\right)\left(\frac{2}{5}\right)x^{\frac{5}{2}} - \left(\frac{5}{3}\right)\left(\frac{2}{3}\right)x^{\frac{3}{2}} + c$$

$$= \frac{4}{15}x^{\frac{5}{2}} - \frac{10}{9}x^{\frac{3}{2}} + c$$