3-0235 — 50 SHEETS — 5 SQUARES
3-0236 — 100 SHEETS — 5 SQUARES
3-0237 — 200 SHEETS — 5 SQUARES
3-0137 — 200 SHEETS — FILLER
COMET

1) $f(x) = x - 3$ $\boxed{F(x) = \frac{x^2}{2} - 3x + C}$

9) $f(x) = 6\sqrt{x} - \sqrt[6]{x}$

$= 6x^{\frac{1}{2}} - x^{1/6}$

$F(x) = \frac{6x^{3/2}}{3/2} - \frac{x^{7/6}}{7/6}$

$\boxed{F(x) = 4x^{3/2} - \frac{6x^{7/6}}{7} + C}$

15) $g(\theta) = \cos\theta - 5\sin\theta$

$G(\theta) = \sin\theta - 5(-\cos\theta) + C$

$\boxed{G(\theta) = \sin\theta + 5\cos\theta + C}$

25) $f''(x) = \frac{2}{3}x^{2/3}$

$f'(x) = \frac{2}{3}\frac{x^{5/3}}{5/3} + C = \frac{2}{5}x^{5/3} + C$

$f(x) = \frac{2}{5}\left(\frac{x^{8/3}}{8/3}\right) + Cx + D$

$\boxed{f(x) = \frac{3}{20}x^{8/3} + Cx + D}$

27) $f'''(t) = e^t$

$f''(t) = e^t + C$

$f'(t) = e^t + Cx + D$

$\boxed{f(t) = e^t + \frac{C}{2}x^2 + Dx + E}$

47) $f'(x) = 2x + 1$, $f(1) = 6$
Find $f(2)$

$f(x) = 2\left(\frac{x^2}{2}\right) + x + C$

$f(x) = x^2 + x + C$

$f(1) = 6 \rightarrow 6 = 1^2 + 1 + C \rightarrow C = 4$

$f(x) = x^2 + x + 4 \rightarrow \boxed{f(2) = 2^2 + 2 + 4 = 10}$

3-0235 — 50 SHEETS — 5 SQUARES
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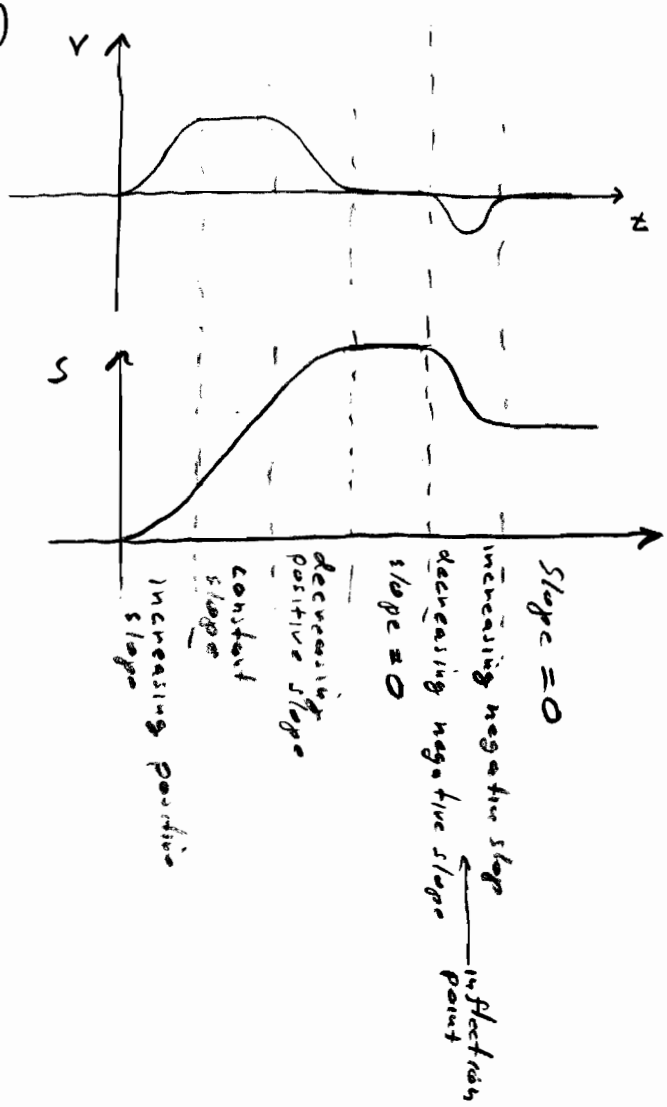
COMET

49) The antiderivative of f is $\boxed{\text{graph b}}$.

* Bad question - graph b should have an inflection point, but it does not.

52)



72) $a(t) = -22 \text{ ft/sec}^2$ $\quad v(0) = 50 \text{ mi/hr}$

$$= \frac{5280 \cdot 50}{3600} \text{ ft/sec}$$

$$= \frac{220}{3} \text{ ft/sec}$$

$v(t) = -22t + C$

$v(0) = \frac{220}{3}$

$\therefore v(t) = -22t + \frac{220}{3}$

Car stops when $v(t) = 0 \rightarrow 22t = \frac{220}{3} \rightarrow t = \frac{10}{3}$

$s(t) = -22t^2 + \frac{220}{3}t + C$, but we don't care about the constant because its initial position doesn't matter, just the distance from $t=0$ to $t = 10/3$

$s(t) = -22t^2 + \frac{220}{3}t$

$\boxed{s(\tfrac{10}{3}) - s(0) = 122.\overline{2} - 0 = 122.\overline{2} \text{ ft}}$