1. (1 pt) Evaluate the definite integral

$$\int_2^9 (2x+4)dx$$

Answer(s) submitted:

- 105

(correct)

2. (1 pt) Evaluate the definite integral:

$$\int_8^{16} dx = \_\_\_\_\_$$

Answer(s) submitted:

- 8

(correct)

3. (1 pt) Evaluate the definite integral:

$$\int_{-4}^{6} (6x - e^x)\, dx = \_\_\_\_\_$$

Answer(s) submitted:

- 60+(1/(e^4))-(e^6)

(correct)

4. (1 pt) Evaluate the definite integral

$$\int_0^{\pi} 6\sin(x)dx$$

Answer(s) submitted:

- 12

(correct)

5. (1 pt) Evaluate the definite integral

$$\int_3^6 \frac{6x^2+5}{\sqrt{x}}dx$$

Answer(s) submitted:

- ((2/5)sqrt(3))((241sqrt(2))-(79))

(correct)

6. (1 pt) $\int_0^5 u^5(\sqrt{u}+\sqrt[5]{u})\, du =$ _____

Answer(s) submitted:

- (15625/403)(62sqrt(5) + (65(5^(1/5))))

(correct)

7. (1 pt) Evaluate the definite integral

$$\int_{0.8}^{1.2} 4\sec^2(x)\, dx$$

Answer: _____

Answer(s) submitted:

- 6.17005

(correct)

8. (1 pt) $\int_0^4 (3e^x + 5\sin x)\, dx =$ _____

Answer(s) submitted:

- 2 + (3(e^4)) - 5cos(4)

(correct)

9. (1 pt) Evaluate the definite integral.

$$\int_3^8 6^t dt$$

Answer(s) submitted:

- (1679400) / ln(6)

(correct)

10. (1 pt) Evaluate the integral

$$\int_0^{0.5} \frac{dx}{\sqrt{1-x^2}}$$

Answer(s) submitted:

- 0.523599

(correct)

11. (1 pt) Evaluate the integral

$$\int_1^{\sqrt{8}} \frac{8}{1+x^2}dx$$

Answer(s) submitted:

- (8arctan(2sqrt(2))) - (2 pi)

(correct)

12. (1 pt) Evalute the definite integral.

$$\int_0^{\pi/4} \sec x \tan x \, dx$$

Integral = _____

Answer(s) submitted:

- `sqrt(2) - 1`

(correct)

---

13. (1 pt) $\int_0^{\pi/4} \frac{7+\cos^3 u}{\cos^2 u}\, du =$ _____

Answer(s) submitted:

- `7 + (1/sqrt(2))`

(correct)

---

14. (1 pt) Evaluate $\int_{-\pi}^{\pi} f(x)\, dx$, where

$$f(x) = \begin{cases} 8x^2, & -\pi \le x < 0 \\ 7\sin(x), & 0 \le x \le \pi. \end{cases}$$

$\int_{-\pi}^{\pi} f(x)\, dx =$ _____

Answer(s) submitted:

- `14 + ((8(pi^3))/3)`

(correct)

---

15. (1 pt) Evaluate the indefinite integral:

$\int 11\, dx =$ _____ $+ C.$

Answer(s) submitted:

- `11x`

(correct)

---

16. (1 pt) Evaluate the indefinite integral:

$\int \left(6x^2+4x-3\right)\, dx =$ _____ $+ C.$

Answer(s) submitted:

- `(2x^3) + (2x^2) -3x`

(correct)

---

17. (1 pt) Evaluate the indefinite integral:

$\int \frac{e^x - 4x}{5}\, dx =$ _____ $+ C.$

Answer(s) submitted:

- `(1/5)((e^x) - 2(x^2))`

(correct)

---

18. (1 pt) Evaluate the indefinite integral:

$\int 5z^{-3} + 7z^{-2} + 2z^{-1}\, dz =$ _____ $+ C.$

Answer(s) submitted:

- `2ln(z) - ((14z + 5)/(2(z^2)))`

(correct)

---

19. (1 pt) Evaluate the indefinite integral:

$\int \frac{5x^4 - 5x}{x^3}\, dx =$ _____ $+ C.$

Answer(s) submitted:

- `((5(x^3 + 2))/(2x))`

(correct)

---

20. (1 pt) Compute the indefinite integral.

$$\int \frac{1-\sin^2 x}{\cos x} dx$$

Answer: _____ $+ C$

Answer(s) submitted:

- `sin(x)`

(correct)

---

21. (1 pt) Find a particular function which is an indefinite integral for:

$$\int (5x + \sec(x)\tan(x)) dx$$

Answer(s) submitted:

- `((5x^2)/2) + sec(x)`

(correct)

---

22. (1 pt) Evaluate the indefinite integral:

$\int 8x^4 - \frac{3}{x^4} - 3\, dx =$ _____ $+ C.$

Answer(s) submitted:

- `((8x^5)/5) + (1/(x^3)) - 3x`

(correct)

23. (1 pt) Evaluate the indefinite integral:

$$\int \left(x^3 + 3 + \frac{6}{x^2+1}\right) dx = \_\_\_\_\_ + C.$$

Answer(s) submitted:

- `((x^4)/(4)) + 3x + (6arctan(x))`

(correct)

24. (1 pt) Evaluate the indefinite integral:

$$\int \left(6e^u + 5\sec^2 u\right) du = \_\_\_\_\_ + C.$$

Answer(s) submitted:

- `6(e^u) + 5tan(u)`

(correct)

25. (1 pt) The velocity function is $v(t) = -t^2 + 4t - 3$ for a particle moving along a line. Find the displacement and the distance traveled by the particle during the time interval [0,5].

displacement = _____

distance traveled = _____

If needed, see page 287 of the Stewart Essential Calculus textbook for the definitions of these terms.

Answer(s) submitted:

- `-20/3`
- `28/3`

(correct)