Verifica A "MONOMI"

Punteggio: 1 punto per i primi venti esercizi, 15 punti per l'ultimo esercizio ed infine 3 punti per i rimanenti: punteggio totale 50.

1. $-4a^4-\frac{3}{4}a = NON-SIMILI$

2. $(-4a^4):(-\frac{1}{4}a^4)=+4\cdot 4a^0=16$

3. $-3ab-\frac{1}{9}ab=\frac{-27-1}{9}ab=-\frac{28}{9}ab$

4. $(-3a^2b)(-\frac{5}{9}ab^2)=+\frac{5}{3}a^3b^3$

5. $(-3a^2)(-3a^2)=+9a^4$

6. $3a^2b-3a^2b=0$

7. $(-5a)(+a)=-5a^2$

8. $(-5a)(+5a^3)=-25a^4$

9. $\frac{2}{5}a^3-\frac{2}{3}a^3=\frac{6-10}{15}a^3=-\frac{4}{15}a^3$

10. $\frac{2}{5}a^3c-\frac{10}{3}a^3c=\frac{6-50}{15}a^3c=-\frac{44}{15}a^3c$

11. $(2ab^4c)^3=8a^3b^{12}c^3$

12. $(-2a^7b^4)^2=+4a^{14}b^8$

13. $(-3a^4bc)^{-3}=\left(-\frac{1}{3}\right)^3a^{-12}b^{-3}c^{-3}=-\frac{1}{27a^{12}b^3c^3}$

14. $(-9a^5bc)^{-2}=\left(-\frac{1}{9}\right)^2a^{-10}b^{-2}c^{-2}=\frac{1}{81a^{10}b^2c^2}$

15. $(4a^4b^5c):(-8a^2b^2c)=-\frac{1}{2}a^2b^3$

16. $(4ab^5c)(-2a^2b^7c)=-8a^3b^{12}c^2$

17. $\frac{-8a^7b^8c^3}{-6ab^4c^2}=\frac{4}{3}a^6b^4c$

18. $\frac{3a^4b^8c^3}{-\frac{5}{6}a^2bc^3}=3\left(-\frac{6}{5}\right)a^2b^7=-\frac{18}{5}a^2b^7$

19. $(-7c)(-4c)=+28c^2$

20. $-8a-a=-9a$

21. $(-7a^2-3a^2)^3=(-10a^2)^3=-1000a^6$

22. $(-\frac{2}{3}b^3-\frac{1}{2}b^3)^2=(\frac{-4-3}{6}b^3)^2=(\frac{-7}{6}b^3)^2=\frac{49}{36}b^6$

23. $(-4c^4)(-\frac{3}{8}c)(c)(-2c^2)=-3c^8$

24. $\frac{2a^4b^8c-4a^4b^8c}{6abc-9abc}=\frac{-2a^4b^8c}{-3abc}=+\frac{2}{3}a^3b^7$

25. $(-a^4b^5)(-3a^2bc)(2c-5c)^2=+3a^6b^6c(-3c)^2=+3a^6b^6c\cdot 9c^2=+27a^6b^6c^3$

26. sapendo che : $a=-1;a^2=1;a^3=-1;b=-\frac{5}{2};b^2=\frac{25}{4}$ sostituiamo:

$$-\frac{8+2(-1)}{5}-\frac{1}{2}(-1)+(-\frac{5}{2})+(-1+\frac{5}{2})^2+4\cdot\frac{5}{2}-4-\frac{25}{4}=-\frac{8-2}{5}+\frac{1}{2}-\frac{5}{2}+(\frac{-2+5}{2})^2+10-4-\frac{25}{4}$$

$$-\frac{6}{5}+\frac{1}{2}-\frac{5}{2}+(\frac{3}{2})^2+10-4-\frac{25}{4}=-\frac{6}{5}-\frac{4}{2}+\frac{9}{4}+6-\frac{25}{4}=-\frac{6}{5}-2+\frac{9}{4}+6-\frac{16}{4}=-\frac{6}{5}+\frac{9}{4}+4-4=\frac{-24+45}{20}=\frac{21}{20}$$