Valutazione di polinomi di primo grado in una variabile

Periodo 1 - UdA 3-4

Valutare i seguenti polinomi per i valori indicati

1. $P(x) = 3x + 3$ $\quad P(2) \quad P(3) \quad P(1)$
2. $Q(x) = -2x - 2$ $\quad Q(-2) \quad Q(-3) \quad Q(4)$
3. $P(x) = -3x + 3$ $\quad P(-3) \quad P(3) \quad P(-2)$
4. $Q(x) = 2x - 1$ $\quad Q(-5) \quad Q(-3) \quad Q(2)$
5. $P(x) = -x + 2$ $\quad P(-4) \quad P(2) \quad P(0)$
6. $Q(x) = x - 5$ $\quad Q(-2) \quad Q(3) \quad Q(2)$
7. $P(x) = \frac{2}{3}x - \frac{1}{4}$ $\quad P\left(\frac{3}{2}\right) \quad P\left(-\frac{1}{4}\right) \quad P(0)$
8. $Q(x) = -\frac{1}{2}x - 2$ $\quad Q\left(\frac{3}{2}\right) \quad Q\left(-\frac{1}{2}\right) \quad Q(2)$
9. $P(x) = -2x - \frac{3}{2}$ $\quad P\left(\frac{1}{4}\right) \quad P(-1) \quad P\left(-\frac{3}{2}\right)$
10. $Q(x) = -\frac{1}{3}x + \frac{1}{3}$ $\quad Q(-1) \quad Q\left(-\frac{3}{2}\right) \quad Q\left(-\frac{1}{2}\right)$

11. $P(x) = \frac{3}{4}x + \frac{1}{2}$ $P(2)$ $P\left(-\frac{4}{3}\right)$ $P\left(-\frac{2}{3}\right)$

12. $Q(x) = \frac{1}{4}x + \frac{2}{3}$ $Q\left(\frac{4}{3}\right)$ $Q\left(-\frac{2}{3}\right)$ $Q(-2)$

13. $P(x) = \frac{3}{5}x$ $P(1)$ $P\left(-\frac{2}{3}\right)$ $P\left(\frac{5}{6}\right)$

14. $Q(x) = -\frac{4}{3}x + 2$ $Q\left(\frac{3}{4}\right)$ $Q\left(-\frac{3}{2}\right)$ $Q\left(\frac{5}{6}\right)$

15. $P(x) = \frac{1}{6}x + \frac{2}{3}$ $P(-1)$ $P(-2)$ $P\left(-\frac{2}{3}\right)$

16. $Q(x) = \frac{5}{6}x - 1$ $Q(3)$ $Q\left(\frac{2}{5}\right)$ $Q\left(-\frac{3}{10}\right)$

17. $P(x) = -4x - \frac{1}{2}$ $P\left(\frac{1}{2}\right)$ $P\left(-\frac{1}{2}\right)$ $P\left(-\frac{3}{4}\right)$

18. $Q(x) = -\frac{5}{3}x + \frac{2}{3}$ $Q(-1)$ $Q(2)$ $Q\left(-\frac{4}{5}\right)$

19. $P(x) = -\frac{7}{4}x + \frac{1}{2}$ $P\left(\frac{1}{2}\right)$ $P(2)$ $P\left(-\frac{5}{7}\right)$

20. $Q(x) = -\frac{2}{7}x + \frac{1}{2}$ $Q\left(\frac{1}{2}\right)$ $Q\left(-\frac{1}{2}\right)$ $Q\left(\frac{7}{4}\right)$

SOLUZIONI

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[1] $P(2) = 9 \;\; P(3) = 12 \;\; P(1) = 6$

[2] $Q(-2) = 2 \;\; Q(-3) = 4 \;\; Q(4) = -10$

[3] $P(-3) = 12 \;\; P(3) = -6 \;\; P(-2) = 9$

[4] $Q(-5) = -11 \;\; Q(-3) = -7 \;\; Q(2) = 3$

[5] $P(-4) = 6 \;\; P(2) = 0 \;\; P(0) = 2$

[6] $Q(-2) = -7 \;\; Q(3) = -2 \;\; Q(2) = -3$

[7] $P\left(\frac{3}{2}\right) = \frac{3}{4} \;\; P\left(-\frac{1}{4}\right) = -\frac{5}{12} \;\; P(0) = -\frac{1}{4}$

[8] $Q\left(\frac{3}{2}\right) = -\frac{11}{4} \;\; Q\left(-\frac{1}{2}\right) = -\frac{7}{4} \;\; Q(2) = -3$

[9] $P\left(\frac{1}{4}\right) = -2 \;\; P(-1) = \frac{1}{2} \;\; P\left(-\frac{3}{2}\right) = \frac{3}{2}$

[10] $Q(-1) = \frac{2}{3} \;\; Q\left(-\frac{3}{2}\right) = \frac{5}{6} \;\; Q\left(-\frac{1}{2}\right) = \frac{1}{2}$

[11] $P(2) = 2 \;\; P\left(-\frac{4}{3}\right) = -\frac{1}{2} \;\; P\left(-\frac{2}{3}\right) = 0$

[12] $Q\left(\frac{4}{3}\right) = 1 \;\; Q\left(-\frac{2}{3}\right) = \frac{1}{2} \;\; Q(-2) = \frac{1}{6}$

[13] $P(1) = \frac{3}{5} \;\; P\left(-\frac{2}{3}\right) = -\frac{2}{5} \;\; P\left(\frac{5}{6}\right) = \frac{1}{2}$

[14] $Q\left(\frac{3}{4}\right) = 1 \;\; Q\left(-\frac{3}{2}\right) = 4 \;\; Q\left(\frac{5}{6}\right) = \frac{8}{9}$

[15] $P(-1) = \frac{1}{2} \;\; P(-2) = \frac{1}{3} \;\; P\left(-\frac{2}{3}\right) = \frac{5}{9}$

[16] $Q(3) = \frac{3}{2} \;\; Q\left(\frac{2}{5}\right) = -\frac{2}{3} \;\; Q\left(-\frac{3}{10}\right) = -\frac{5}{4}$

[17] $P\left(\frac{1}{2}\right) = -\frac{5}{2} \;\; P\left(-\frac{1}{2}\right) = \frac{3}{2} \;\; P\left(-\frac{3}{4}\right) = \frac{5}{2}$

[18] $Q(-1) = \frac{7}{3} \;\; Q(2) = -\frac{8}{3} \;\; Q\left(-\frac{4}{5}\right) = 2$

[19] $P\left(\frac{1}{2}\right) = -\frac{3}{8} \;\; P(2) = -3 \;\; P\left(-\frac{5}{7}\right) = \frac{7}{4}$

[20] $Q\left(\frac{1}{2}\right) = \frac{5}{14} \;\; Q\left(-\frac{1}{2}\right) = \frac{9}{14} \;\; Q\left(\frac{7}{4}\right) = 0$