

Answer The Following

1) Find the sum of following polynomials

A) $2p^3 + q^3 - 14pq - 2q$ and $-p^3 - 10q^3 + 9p^2q + 2pq - 12p + 12q - 18$

B) $9x^2y - 3xy^2 - 8x + 14y - 16$ and $12x^3 + 4y^3 - 12x^2y - 4xy + 9$

 2) Find value of a from equation $(a - 5)^2 - (a + 3)^2 = -64$

Hint : Use identity $(a+b)(a-b) = a^2 - b^2$

 3) If $a + b = 11$,

$b + c = 12$, and

$c + a = 13$,

 then what is the value of $a + b + c$?

4) Deborah bought a total of 17 hens and ducks. He got a discount of \$ 0.90 for each hen and a discount of \$ 1.10 for each duck. She saved \$ 16.90 in total. How many ducks did she buy?

 5) If $f(x) = x^2$, find the value of $\frac{f(x+b) - f(x)}{b}$.

Fill in the blanks

 6) If $y = -1$.

$(-2y^2 - 8y - 1) - (-4y^2 + 8y - 6) = \underline{\hspace{2cm}}$

 7) Ages of Karen and Sharon are in ratio 2:7 . If sum of their ages is 45 years, age of Sharon is years.

Choose correct answer(s) from given choice

 8) If $2x + 2 = 24$, what is the value of $2x - 2$?

a. 23

b. 17

c. 20

d. 27

 9) Brian earns \$ x daily and spends \$ y per week. What is his saving for 7 weeks ?

 a. $7x + 49y$

 b. $49x - 7y$

 c. $7x - 49y$

 d. $49x + 7y$