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Grade 8 Math
Algebraic Identities

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Answer The Following

1) If $p^2+\frac{1}{p^2}=14$, find the value of $\left(p-\frac{1}{p}\right)^2$

2) There are two numbers such that the sum of their squares is 18 and sum of the numbers is 6. Find their product.

3) Solve the following using the standard identity $(x + a)(x + b) = x^2 + (a + b)x + ab$

A) 102×99 B) 1003×1001

4) Solve the following using the standard identity $(a+b)(a-b) = a^2 - b^2$

A) 1003×997 B) 104×96

5) Find value of $\frac{(30.1)^2 - (19.9)^2}{10.2}$ using standard identities.

Choose correct answer(s) from given choice

6) If $xy = 3$, and $3x - 5y = -4$, find value of $9x^2 + 25y^2$.

a. 115 b. 106

c. 97 d. 101

7) If $(p - 2)^2 + (q - 5)^2 + (r - 1)^2 = 0$, find the value of $pqr - 8$.

a. 10 b. 2

c. 8

8) If $u+v+w+x+\frac{1}{u+v+w+x}=2$, find the value of $(u+v+w+x)^6+\frac{1}{(u+v+w+x)^6}$

a. 2 b. 1

c. 1/2 d. 0

Fill in the blanks

9) $\frac{(13.325)^2 - (6.675)^2}{12.177 - 3.327}$ = _____ (solve using standard identities).

10) . . 2 2 . . . . . .2 . . .2