

**Q1:**

For which values of  $k$  is  $16x^2+kx+81$  a perfect square?

- ☐ A 13, -13
- ☐ B 72, -72
- ☐ C 36, -36
- ☐ D 26, -26

**Q2:**

Complete the expression  $16x^4 \dots\dots\dots + y^2$  to make a perfect square.

- ☐ A  $+8x^2y$  or  $-8x^2y$
- ☐ B  $+10xy$  or  $-10xy$
- ☐ C  $+4x^2y$  or  $-4xy^2$
- ☐ D  $+8xy$  or  $-8xy$

**Q3:** Which of the following is a perfect square?

- ☐ A  $x^2+81$
- ☐ B  $x^2-18x-81$
- ☐ C  $x^2-81$
- ☐ D  $x^2-9x+81$
- ☐ E  $x^2-18x+81$

**Q4:** Complete the quadratic expression  $9x^2 \dots\dots\dots + 144$  to make a perfect square.

- ☐ A  $+72x^4$
- ☐ B  $+72x, -72x$
- ☐ C  $+72x^4, -72x^4$
- ☐ D  $+30x^2$
- ☐ E  $+36x$  or  $-36x$

**Q5:** If  $9y^2+30y+b$  is a perfect square, what is the value of  $b$ ?

- A. 5
- B. 25
- C.  $5y^2$
- D.  $25y^2$

**Q6** Complete the expression ..... $-60x^2+25$  to make a perfect square.

- ☐ A  $-36x^4$
- ☐ B  $-12x^4$
- ☐ C  $12x^4$
- ☐ D  $36x^4$
- ☐ E  $6x$

**Q7:**

**Q7** Complete the expression  $\frac{4}{25}a^2$  ..... +  $\frac{1}{9}b^2$  to make a perfect square.

- ☐ A  $\pm \frac{4}{15}ab$
- ☐ B  $+\frac{4}{5}ab$
- ☐ C  $+\frac{2}{25}ab$
- ☐ D  $\pm \frac{2}{15}ab$
- ☐ E  $\pm \frac{4}{15}ab$

**Q8:**

If  $ky^2-24y+9$  is a perfect square, what is the value of  $k$ ?

- A.  $16y^2$
- B.  $25y^2$
- C.  $16y$
- D.  $4y^2$

**Q9:**

Factorize fully  $9x^2+36xy+36y^2$

- ☐ A  $9(2x+y)^2$
- ☐ B  $9(x+2y)^2$
- ☐ C  $(x+2y)^2$
- ☐ D  $9(y+2x)^2$
- ☐ E  $9(x+2y)^2$

**Q10:**

Factorize fully  $x^2-10xy+25y^2$ .

- ☐ A  $(-5x+y)^2$
- ☐ B  $(1-5xy)^2$
- ☐ C  $(1+5xy)^2$
- ☐ D  $(x-5y)^2$
- ☐ E  $(x+5y)^2$