

# Quiz #2

Math Time pp. 10

A.

1. #5

2. #15

3. #17

B.

1. #4

2. #5

3. #6

4. #12

5. #14

6. #15

7. #18

8. #19

## Quiz #2

A.

$$\begin{aligned} 1. & y^2 - 121 \\ &= (y)^2 - (11)^2 \\ &= (y - 11)(y + 11) \end{aligned}$$

$$\begin{aligned} 2. & x^2 - \frac{1}{16} \\ &= (x)^2 - \left(\frac{1}{4}\right)^2 \\ &= \left(x - \frac{1}{4}\right)\left(x + \frac{1}{4}\right) \end{aligned}$$

$$\begin{aligned} 3. & y^2 - \frac{9}{25} \\ &= (y)^2 - \left(\frac{3}{5}\right)^2 \\ &= \left(y - \frac{3}{5}\right)\left(y + \frac{3}{5}\right) \end{aligned}$$

B.

$$\begin{aligned} 1. & 144 - 16n^2 \\ &= 16(9 - n^2) \\ &= 16[(3)^2 - (n)^2] \\ &= 16(3 - n)(3 + n) \end{aligned}$$

$$\begin{aligned} 2. & m^2n^2 - 196 \\ &= (mn)^2 - (14)^2 \\ &= (mn - 14)(mn + 14) \end{aligned}$$

$$\begin{aligned} 3. & 169a^2 - b^2c^2 \\ &= (13a)^2 - (bc)^2 \\ &= (13a - bc)(13a + bc) \end{aligned}$$

$$\begin{aligned} 4. & \frac{1}{16}x^2 - \frac{1}{25}y^2 \\ &= \left(\frac{1}{4}x\right)^2 - \left(\frac{1}{5}y\right)^2 \end{aligned}$$

$$= \left( \frac{1}{4}x - \frac{1}{5}y \right) \left( \frac{1}{4}x + \frac{1}{5}y \right) = 5(5x - 6)(5x + 6)$$

$$5. 144a^4 - 169b^4$$

$$= (12a^2)^2 - (13b^2)^2$$

$$= (12a^2 - 13b^2)(12a^2 + 13b^2)$$

$$6. 125x^2 - 180$$

$$= 5(25x^2 - 36)$$

$$= 5[(5x)^2 - (6)^2]$$

$$7. y^4 - 16$$

$$= (y^2)^2 - (4)^2$$

$$= (y^2 - 4)(y^2 + 4)$$

$$= (y - 2)(y + 2)(y^2 + 4)$$

$$8. p^6 - 81$$

$$= (p^3)^2 - (9)^2$$

$$= (p^3 - 9)(p^3 + 9)$$