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.

1. $y^2 - 121$
   $= (y)^2 - (11)^2$
   $= (y-11)(y+11)$
2. $x^2 - \frac{1}{16}$
   $= (x)^2 - (\frac{1}{4})^2$
   $= (x-\frac{1}{4})(x+\frac{1}{4})$
3. $y^2 - \frac{9}{25}$
   $= (y)^2 - (\frac{3}{5})^2$
   $= (y-\frac{3}{5})(y+\frac{3}{5})$

B.

1. $144 - 16n^2$
   $= 16(9 - n^2)$
   $= 16[(3)^2 - (n)^2]$
   $= 16(3-n)(3+n)$
2. $m^2n^2 - 196$
   $= (mn)^2 - (14)^2$
   $= (mn-14)(mn+14)$
3. $169a^2 - b^2c^2$
   $= (13a)^2 - (bc)^2$
   $= (13a-bc)(13a+bc)$
4. $\frac{1}{16}x^2 - \frac{1}{25}y^2$
   $= (\frac{1}{4}x)^2 - (\frac{1}{5}y)^2$

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

5. $144a^4 - 169b^4$
$= (12a^2)^2 - (13b^2)^2$
$= \left(12a^2 - 13b^2\right)\left(12a^2 + 13b^2\right)$

6. $125x^2 - 180$
$= 5(25x^2 - 36)$
$= 5[(5x)^2 - (6)^2]$
$= 5\,(5x-6)\,(5x+6)$

7. $y^4 - 16$
$= (y^2)^2 - (4)^2$
$= (y^2-4)(y^2+4)$
$= (y-2)\,(y+2)\,\left(y^2+4\right)$

8. $p^6 - 81$
$= (p^3)^2 - (9)^2$
$= \left(p^3-9\right)\left(p^3+9\right)$