

8, 10, 12, 14, 6

$$6. \quad 121x^2 - 1 \quad a^2 - b^2 = (a+b)(a-b)$$

$$a = 11x \quad b = 1$$

$$(11x + 1)(11x - 1)$$

$$121x^2 - \cancel{11x} + \cancel{11x} - 1$$

$$121x^2 - 1 \quad \checkmark$$

$$8. \quad 9s^2 - 24s + 16 \quad a^2 - 2ab + b^2 = (a-b)^2$$

$$a = 3s \quad b = 4$$

$$(3s - 4)^2$$

$$10. \quad 4h^2 - 81$$

$$a = 2h \quad b = 9$$

$$(2h - 9)(2h + 9)$$

$$12. \quad 16x^2 + 40xy + 25y^2$$

$$a = 4x \quad b = 5y$$

$$(4x + 5y)^2$$

$$14. \quad 9x^4 - 16z^2$$

$$3x^2 \quad 4z$$

$$x^2 \cdot x^2 = x^4$$

$$(x^2)^2 = x^4$$

$$(3x^2 - 4z)(3x^2 + 4z)$$

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11.  $121s^2 - 66st + 9t^2$

Homework:

p. 186 #15, 16

$$5a^3 - 5a$$

$$\text{gcf: } 5a$$

$$5a \left( \frac{5a^3}{5a} - \frac{5a}{5a} \right)$$

$$5a(a^2 - 1)$$

$$a=a \quad b=1$$

$$5a(a+1)(a-1)$$

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

$$\overbrace{xy^3 - 2xy^2 + xy}$$

$$\text{gcf} = xy$$

$$xy \left( \frac{xy^3}{xy} - \frac{2xy^2}{xy} + \frac{xy}{xy} \right)$$

$$xy(y^2 - 2y + 1)$$

$$a = y \quad b = 1$$

$$xy(y-1)^2$$

$$xy(y-1)(y-1)$$

### Factoring

- 1) is there a gcf?
- 2) if there is factor it out
- 4) factor whats left over