$$\frac{}{18\ +\ 2} = \frac{}{20}$$

Name_____

1. Write the simplified algebraic expression represented by the model.   [1]

    (Note: Shaded tiles are negative.)

    _____

2. Draw the expression $2x^2 - 3x + 4$ using tiles (shaded is negative.   [1]

3. Simplify.   [1,2]

a) $5b^2 - 2b + 4 - 3b - 4b^2$ b) $5x^2 - (-2x) + (-4) - 3x - (+1) - x^2$

4. Simplify.   [1,2]

a) $\left(3x^2 - 7x + 1\right) + \left(x^2 + 5x - 4\right)$ b) $\left(3x^2 + 5x - 1\right) - \left(4x^2 - 7x + 2\right)$

5. Simplify.   [4]

a) $\left(3y^5\right)\left(-2y^3\right)$ b) $\dfrac{-12a^6b^2}{3a^4b^{-5}}$ c) $\left(3x^{-5}y^4\right)^2$ d) $\left(\dfrac{x^3}{y^2}\right)^5$

6. Simplify.   [6]

a) $\dfrac{\left(2x^2y^{-1}\right)^4}{\left(-2x^3y^{-3}\right)^3}$ b) $\left(-3ab^{-4}\right)^2\left(2a^3b^{-2}\right)^3$