

Chapter 5 Prerequisite Skills

Show all your work.

1. For each expression, identify

- the number of terms
- whether it is a monomial, binomial, trinomial, or polynomial

a) $3p^2$

b) $(3x)(5y)$

c) $h + 2h^2 - 3$

d) $2x^2 - 4x + 6$

2. What expression is represented by each set of algebra tiles? Shaded tiles are positive and white tiles are negative.

a) 

b) 

c) 

3. Determine each product. Use a model if necessary.

a) $(-2x)(4.5x)$

b) $\left(\frac{3t}{7}\right)(14t)$

c) $(0.5s)\left(\frac{s}{4}\right)$

4. Determine each quotient. Use a model if necessary.

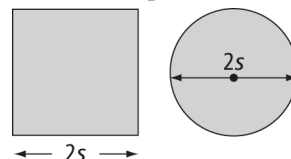
a) $\frac{15p^2}{3p}$

b) $\frac{-8.4n^2}{2.1n}$

c) $\frac{16.8xy}{(-4x)}$

5. A rectangle is five times as long as it is wide. If the area of the rectangle is $12\,500\text{ cm}^2$, what are its dimensions? Use a diagram to help you.

6. A square has side lengths of $2s$. A circle has a diameter that is the same length as the sides of the square. What is the ratio of the areas of the two shapes?



7. Expand.

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

c) $(6x)\left(\frac{2}{3}x - 2\right)$ d) $(3.6p - 1.2)\left(\frac{p}{3}\right)$

8. Divide.

a) $\frac{(10b^2 - 8b)}{2b}$

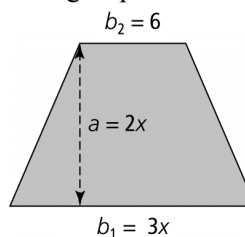
b) $\frac{3.9m^2 - 1.3m}{-1.3}$

c) $\frac{-4h^2 + h}{h}$

9. The area of a trapezoid is given by the

formula $A = \frac{1}{2}a(b_1 + b_2)$, where a is the

altitude and b_1 and b_2 are the bases of the trapezoid. What is an expression for the area of the following trapezoid?



10. A rectangle has an area of $15v^2 - 12v$ square units. The width of the rectangle is $3v$ units. What is the length of the rectangle?

