

SECONDARY MATH II  
UNIT 1 REVIEW

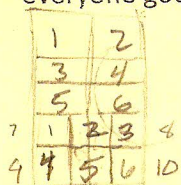
NAME Key PERIOD \_\_\_\_\_

Solve.

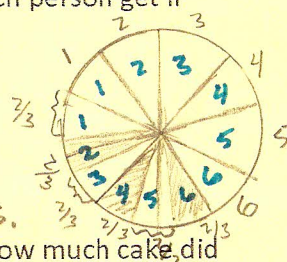
1. Angela earned \$85 doing chores. She put  $\frac{3}{5}$  of the money in savings. She then spent  $\frac{1}{2}$  the remaining money on shoes. How much money does she have left to spend?

\$17

2. I invited 6 people to a party, including me. I had 10 pieces of cake. How much did each person get if everyone got a fair share? Draw a diagram to support your answer.



$$\frac{10 \text{ pieces}}{6 \text{ people}} = \frac{5}{3} \text{ or } 1\frac{2}{3}$$

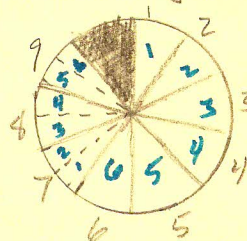


Each person gets  $1 + \frac{2}{3}$  pieces.

3. My mom then got home with 9 more pieces of cake. We shared these equally too. How much cake did each person get this time? Draw a diagram to support your answer.

$$\frac{9}{6} = \frac{3}{2}$$

each person got  $1 + \frac{1}{2}$  pieces of cake.



Evaluate.

4.  $(3 \cdot 2)^2$   
36

5.  $(4x^3)^4$   
 $256x^{12}$

6.  $5^2 \cdot 5^{-5}$   
 $\frac{1}{125}$

7.  $\left(\frac{1}{3}\right)^3$   
 $\frac{1}{27}$

Simplify

8.  $2m^2 \cdot 3m^5$   
 $6m^7$

9.  $3j^3k^{-2} \cdot 3j^{-2}k^4$   
 $9jk^2$

10.  $(x^3z^5)^0$   
1

11.  $(3ab^2)^2$   
 $3^2a^2b^4$

12.  $(5w^3)^{-2}$   
 $\frac{1}{25w^6}$

13.  $\frac{r^3}{r^{-2}}$   
 $r^5$

14.  $\frac{3a^4b^{-4}c^{-3}}{5a^2b^{-3}c^4}$   
 $\frac{3a^2}{5b^7c^7}$

15.  $\frac{2jk^{-2}m^3}{2km}$   
 $\frac{jm^2}{k^3}$

Evaluate.

16.  $\sqrt{28}$

$2\sqrt{7}$

17.  $\sqrt[3]{-27}$

$-3$

18.  $\sqrt[5]{64}$

$2\sqrt[5]{2}$

19.  $\sqrt[4]{243v^6}$

$3\sqrt[4]{3v^2}$

20.  $\sqrt[3]{5^3}$

$5$

Simplify.

21.  $\sqrt{8x^4}$

$2x^2\sqrt{2}$

22.  $\sqrt[3]{64m^7n}$

$4m^2\sqrt[3]{mn}$

23.  $\sqrt[5]{-32x^6y^{10}z}$

$-2xy^2\sqrt[5]{xz}$

24.  $\sqrt[6]{448x^7y^8}$

$2xy\sqrt[6]{7xy^2}$

Evaluate without a calculator. Write in radical form, then simplify.

25.  $9^{\frac{1}{2}}$

$3$

26.  $16^{\frac{3}{4}}$

$8$

27.  $8^{\frac{1}{3}}$

$\frac{1}{2}$

28.  $32^{\frac{2}{5}}$

$4$

29.  $27^{\frac{4}{3}}$

$\frac{1}{81}$

Simplify. Leave answers with rational exponents and use only positive exponents.

30.  $x^{\frac{1}{2}} \cdot x^{\frac{2}{3}}$

$x^{\frac{7}{6}}$

31.  $y^2 \cdot y^{\frac{1}{2}}$

$y^{\frac{5}{2}}$

32.  $w^{\frac{-2}{5}} \cdot w^{\frac{3}{2}}$

$w^{\frac{11}{10}}$

33.  $(j^{-10})^{\frac{1}{4}}$

$\frac{1}{j^{\frac{5}{2}}}$

34.  $\left(m^{\frac{3}{5}}\right)^{\frac{5}{3}}$

$m$

35.  $\left(x^{-\frac{1}{2}}y^{-\frac{2}{3}}\right)^{-6}$

$x^3y^4$

36.  $\frac{k^{\frac{2}{7}}}{k^{\frac{1}{7}}}$

$k^{\frac{1}{7}}$

37.  $\frac{k^2}{k^{\frac{2}{3}}}$

$k^{\frac{4}{3}}$

38.  $\frac{x^4y^{-\frac{1}{3}}}{x^{\frac{3}{2}}y^3}$

$\frac{x^{\frac{11}{2}}}{y^{\frac{10}{3}}}$

39.  $\frac{a^{\frac{5}{2}}b^{\frac{3}{2}}}{a^{\frac{3}{2}}b^{\frac{1}{4}}}$

$ab^{\frac{5}{4}}$