Name : _____ Score : _____

Teacher : _____ Date : _____

1) (+15) - (+61) =

2) (+27) - (+61) =

3) (+44) - (+43) =

4) (-61) - (+62) =

5) (+52) - (+35) =

6) (-54) - (-68) =

7) (+60) - (-56) =

8) (-93) - (-17) =

9) (+26) - (+93) =

10) (-26) - (+73) =

11) (-97) - (-61) =

12) (-76) - (-46) =

13) (+66) - (-58) =

14) (+17) - (+77) =

15) (+24) - (-60) =

16) (-33) - (+35) =

17) (-80) - (+94) =

18) (+79) - (+69) =

19) (+19) - (-68) =

20) (+5) - (+18) =

21) (+13) - (-28) =

22) (-51) - (-94) =

23) (-82) - (+91) =

24) (-47) - (-92) =

25) (-69) - (+70) =

26) (-79) - (+87) =

27) (+43) - (-54) =

28) (-66) - (-4) =

29) (+70) - (-36) =

30) (-65) - (-48) =

Name : _____ Score : _____

Teacher : _____ Date : _____

1) (-86) + (+8) =

2) (+86) - (+99) =

3) (-2) x (-72) =

4) (-864) ÷ (+18) =

5) (+84) + (+92) =

6) (+61) - (+92) =

7) (+594) ÷ (+33) =

8) (-759) ÷ (+33) =

9) (-86) x (-86) =

10) (+161) ÷ (-23) =

11) (-28) + (+37) =

12) (-91) - (+97) =

13) (+25) x (-4) =

14) (-2806) ÷ (-46) =

15) (+42) - (+14) =

16) (+93) x (+94) =

17) (+13) - (-54) =

18) (+16) + (+62) =

19) (+14) - (-55) =

20) (-68) x (+8) =

21) (+96) x (+27) =

22) (+72) + (-11) =

23) (-49) x (+76) =

24) (-42) - (+9) =

25) (+65) - (-53) =

26) (+7) + (+90) =

27) (-6622) ÷ (+77) =

28) (+60) x (+50) =

29) (+7387) ÷ (+89) =

30) (+44) + (+40) =

Name : _____ Score : _____

Teacher : _____ Date : _____

---

1) (+60) x (-46) =

2) (+47) + (+59) =

3) (+94) + (-56) =

4) (+71) - (+10) =

5) (+2460) ÷ (-60) =

6) (+84) - (-51) =

7) (+219) ÷ (-73) =

8) (-7) - (+83) =

9) (+76) x (+40) =

10) (+35) - (+98) =

11) (-82) + (+13) =

12) (+6059) ÷ (-83) =

13) (+69) x (+2) =

14) (+60) - (+48) =

15) (+98) + (+9) =

16) (-291) ÷ (+3) =

17) (+2) - (+23) =

18) (+76) x (+2) =

19) (+25) x (+96) =

20) (+57) - (+64) =

Name : _____ Score : _____

Teacher : _____ Date : _____

Evaluate the Exponents

1) $(12)^5$ = _____

2) $(5)^2$ = _____

3) $(3)^4$ = _____

4) $(10)^3$ = _____

5) $(8)^3$ = _____

6) $(9)^3$ = _____

7) $(6)^4$ = _____

8) $(2)^3$ = _____

9) $(2)^2$ = _____

10) $(3)^5$ = _____

11) $(7)^2$ = _____

12) $(12)^5$ = _____

13) $(8)^3$ = _____

14) $(2)^4$ = _____

15) $(3)^5$ = _____

16) $(10)^4$ = _____

17) $(9)^2$ = _____

18) $(4)^2$ = _____

19) $(4)^4$ = _____

20) $(7)^5$ = _____

Name : _____ Score : _____

Teacher : _____ Date : _____

Evaluate the Exponents

1) $(-2)^{2}$ = _____

2) $(-12)^{5}$ = _____

3) $(12)^{4}$ = _____

4) $(-5)^{3}$ = _____

5) $(10)^{3}$ = _____

6) $(6)^{5}$ = _____

7) $(-8)^{2}$ = _____

8) $(-9)^{5}$ = _____

9) $(9)^{2}$ = _____

10) $(3)^{5}$ = _____

11) $(-7)^{3}$ = _____

12) $(-4)^{2}$ = _____

13) $(8)^{5}$ = _____

14) $(7)^{4}$ = _____

15) $(2)^{3}$ = _____

16) $(3)^{4}$ = _____

17) $(5)^{4}$ = _____

18) $(-3)^{2}$ = _____

19) $(4)^{3}$ = _____

20) $(-10)^{4}$ = _____

Converting Fractions (B)

Name: _____ Date: _____

Convert each mixed fraction to an improper fraction.

$2\frac{2}{5} = \_$	$5\frac{3}{4} = \_$	$6\frac{3}{5} = \_$	$7\frac{1}{6} = \_$
$9\frac{1}{4} = \_$	$3\frac{11}{12} = \_$	$7\frac{4}{9} = \_$	$8\frac{2}{15} = \_$
$6\frac{1}{12} = \_$	$1\frac{7}{9} = \_$	$1\frac{2}{9} = \_$	$8\frac{1}{10} = \_$
$4\frac{5}{12} = \_$	$7\frac{5}{6} = \_$	$3\frac{3}{10} = \_$	$6\frac{6}{7} = \_$
$4\frac{1}{7} = \_$	$7\frac{4}{7} = \_$	$3\frac{4}{5} = \_$	$8\frac{3}{8} = \_$
$7\frac{1}{5} = \_$	$5\frac{8}{15} = \_$	$2\frac{4}{15} = \_$	$8\frac{7}{10} = \_$
$7\frac{5}{9} = \_$	$9\frac{5}{7} = \_$	$8\frac{2}{7} = \_$	$1\frac{1}{8} = \_$
$3\frac{7}{8} = \_$	$5\frac{1}{3} = \_$	$2\frac{11}{15} = \_$	$1\frac{1}{2} = \_$
$2\frac{1}{15} = \_$	$4\frac{8}{9} = \_$	$6\frac{5}{8} = \_$	$9\frac{3}{7} = \_$
$8\frac{9}{10} = \_$	$1\frac{1}{9} = \_$	$9\frac{7}{12} = \_$	$4\frac{7}{15} = \_$

Converting Fractions (A)

Name: _____ Date: _____

Convert each mixed fraction to an improper fraction.

$9\frac{1}{9} = \frac{\quad}{\quad}$	$3\frac{8}{9} = \frac{\quad}{\quad}$	$8\frac{7}{12} = \frac{\quad}{\quad}$	$7\frac{7}{9} = \frac{\quad}{\quad}$
$3\frac{11}{15} = \frac{\quad}{\quad}$	$3\frac{2}{5} = \frac{\quad}{\quad}$	$4\frac{2}{7} = \frac{\quad}{\quad}$	$7\frac{1}{3} = \frac{\quad}{\quad}$
$5\frac{1}{7} = \frac{\quad}{\quad}$	$2\frac{7}{10} = \frac{\quad}{\quad}$	$3\frac{4}{5} = \frac{\quad}{\quad}$	$4\frac{5}{7} = \frac{\quad}{\quad}$
$3\frac{3}{8} = \frac{\quad}{\quad}$	$6\frac{1}{8} = \frac{\quad}{\quad}$	$5\frac{5}{6} = \frac{\quad}{\quad}$	$7\frac{4}{15} = \frac{\quad}{\quad}$
$4\frac{2}{9} = \frac{\quad}{\quad}$	$9\frac{1}{6} = \frac{\quad}{\quad}$	$7\frac{5}{8} = \frac{\quad}{\quad}$	$1\frac{5}{9} = \frac{\quad}{\quad}$
$6\frac{4}{7} = \frac{\quad}{\quad}$	$8\frac{7}{15} = \frac{\quad}{\quad}$	$6\frac{1}{5} = \frac{\quad}{\quad}$	$8\frac{1}{12} = \frac{\quad}{\quad}$
$8\frac{1}{15} = \frac{\quad}{\quad}$	$7\frac{5}{12} = \frac{\quad}{\quad}$	$1\frac{3}{10} = \frac{\quad}{\quad}$	$6\frac{8}{15} = \frac{\quad}{\quad}$
$1\frac{9}{10} = \frac{\quad}{\quad}$	$4\frac{6}{7} = \frac{\quad}{\quad}$	$1\frac{1}{4} = \frac{\quad}{\quad}$	$1\frac{11}{12} = \frac{\quad}{\quad}$
$3\frac{4}{9} = \frac{\quad}{\quad}$	$3\frac{1}{10} = \frac{\quad}{\quad}$	$2\frac{1}{2} = \frac{\quad}{\quad}$	$4\frac{3}{5} = \frac{\quad}{\quad}$
$4\frac{7}{8} = \frac{\quad}{\quad}$	$6\frac{2}{15} = \frac{\quad}{\quad}$	$5\frac{3}{4} = \frac{\quad}{\quad}$	$5\frac{3}{7} = \frac{\quad}{\quad}$

Name : _____ Score : _____

Teacher : _____ Date : _____

Order of Operations

1) $(42 - 2) \div 4 + 5^2$

2) $(66 - 4^2) \div (28 - 3)$

3) $(34 - 6) \div 14 - 4^2$

4) $(40 - 2^2) \div (4 - 2)$

5) $(13 - 5)^2 + (14 \div 2)$

6) $8 \times (12 - 4) + 4^2$

7) $2 \times (13 - 6) - 5^2$

8) $(3 \times 10 - 5^2) - 2$

9) $(4 \times 7 - 9^2) + 3$

10) $(12 - 5)^2 + (14 \div 2)$

Simplifying Expressions (A)

Simplify each expression.

1. $2x^2 - 10x^2 + 9x$

2. $7a^2 + 8a + 9a^2$

3. $5 \cdot 5x^2 \cdot (-5x)$

4. $-1 - a^2 - 4a^2$

5. $-x^2 - 1 - 5x^2$

6. $-1 + 1 - c^2$

7. $2 + 8z^2 + 1$

8. $x^2 - x - x$

9. $-\dfrac{u^2}{-u^2} \cdot (-u^2)$

10. $-a \cdot \dfrac{7a^2}{a}$

Adding Linear Expressions (C)

Simplify each expression.

1. $(-3z + 1) + (-8z + 9)$

2. $(-8k + 5) + (-6k - 3)$

3. $(-t + 2) + (-6t - 5)$

4. $(5k - 3) + (-4k - 8)$

5. $(-5s + 6) + (5s + 3)$

6. $(-3r + 7) + (-2r - 8)$

7. $(-5w) + (3w - 3)$

8. $(5x - 6) + (2x + 5)$

9. $(4z - 9) + (3z + 5)$

10. $(7w - 7) + (4w + 7)$

Adding Linear Expressions (B)

Simplify each expression.

1. $(-6c) + (8c - 6)$

2. $(k + 5) + (5k - 5)$

3. $(9h - 8) + (-6h + 3)$

4. $(3k - 6) + (-9k - 4)$

5. $(-6k - 5) + (4k - 7)$

6. $(-7c - 9) + (7c + 7)$

7. $(2b + 9) + (9b + 5)$

8. $(q - 4) + (-2q - 6)$

9. $(8k - 4) + (-4)$

10. $(9s + 9) + (-5s - 9)$

Name : _____ Score : _____

Teacher : _____ Date : _____

Solve the Equations

1) $2.5 = \frac{v}{7}$ ·7

$v = 17.5$

2) $-11 = 4.8 + h$

3) $z + 6.6 = -2.8$

4) $-60.5 = -5.5\,d$

5) $-3.2 = b + 3.6$

6) $\frac{2.6\,x}{2.6} = \frac{10.4}{2.6}$

$x = 4$

7) $\frac{y}{3} = 2.5$

8) $4 = 5.6 + r$

9) $28.5 = -5.7\,n$

10) $4.6\,k = -36.8$

Name : _____ Score : _____

Teacher : _____ Date : _____

Solve the Equations

1) $-6 = \frac{c}{7}$ · 7

$-42 = c$

2) $-6 = 3 + s$

3) $-7 = 5 + a$

4) $\frac{v}{2} = 4$

5) $y - 2 = 8$

6) $\frac{35}{7} = \frac{7x}{7}$

$5 = x$

7) $-2d = -22$

8) $-6z = -66$

9) $4 = r - 7$

10) $16 = 2b$

Name : _____ Score : _____

Teacher : _____ Date : _____

Solve the Equations

Round your answers to the nearest hundredth if needed.

1) $-29 = 7 + 9(a - 2)$

$-29 = 7 + 9a - 18$

$-29 = 9a - 11$

$+11 \quad +11$

$-18 = 9a$

$\frac{-18}{9} = \frac{9a}{9}$

$a = -2$

2) $-2z + 9 - 8z = -26$

3) $-2(9f - 4) = 24$

4) $-30 + 6r = 3(5r - 8)$

5) $29 = -3n - 5n$

6) $15 = 7(5b + 6)$

7) $7c - 8c = 31$

8) $3(4k - 2) = 28 - 9k$

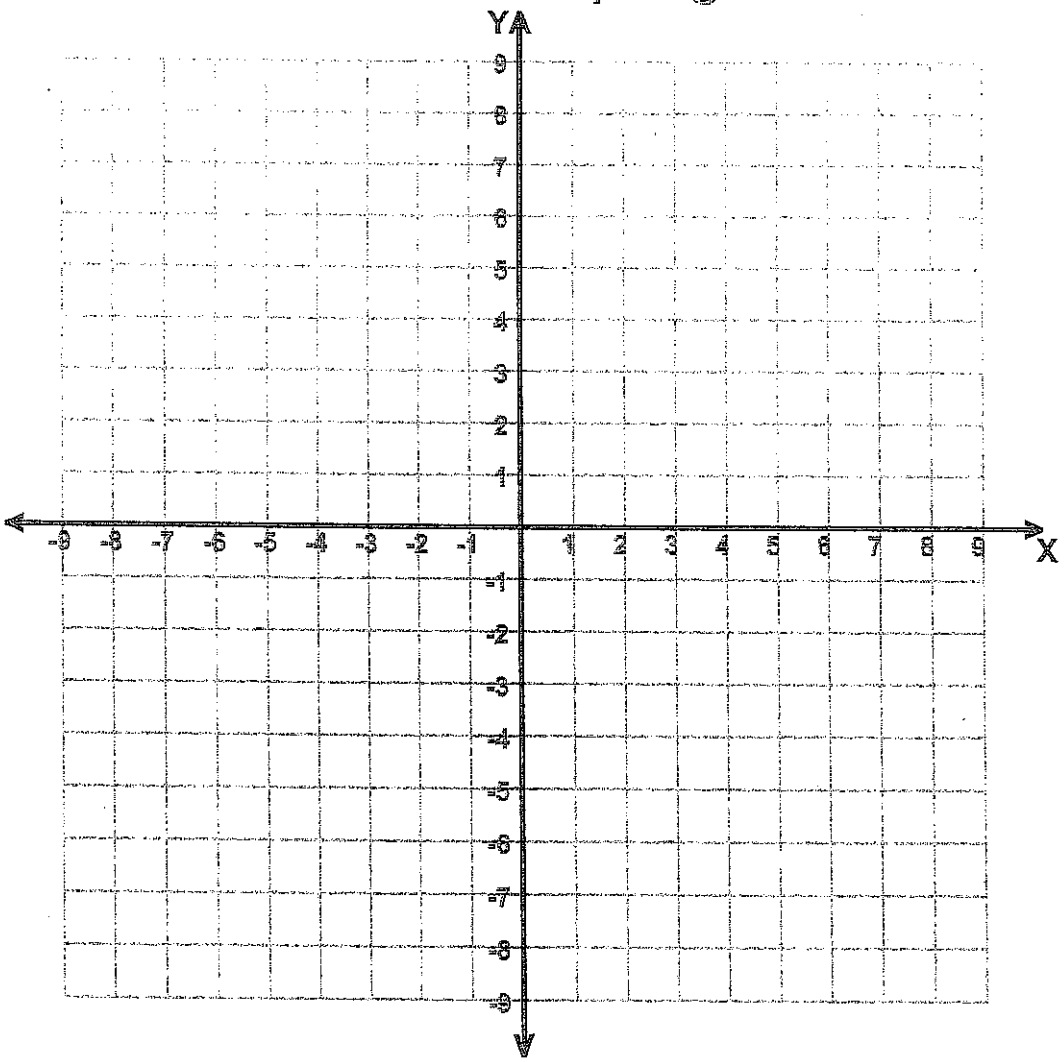
9) $-3(8 - 6s) = 30$

10) $-6 + 4(1 + 2x) = -24$

Name : _____ Score : _____

Teacher : _____ Date : _____

Four Quadrant Graphing Puzzle



Connect each sequence of points with a line.

(-9,3) , (-7,5) , (-4,6) , (0,9) , (1,5) , (5,4) , (8,6) , (6,3) , (8,0) , (5,2) , (-1,-1) , (-5,-1) , (-9,3) End of Sequence

(-5,2) , (2,2) , (-2,1) , (-5,2) End of Sequence

(-6,4) , (-6,4.5) , (-5.5,4.5) , (-5.5,4) , (-6,4) End of Sequence

(-9,3) , (-6,3) End of Sequence

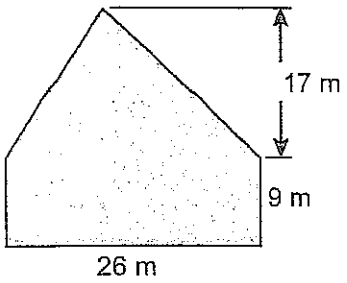
Name : _____ Score : _____

Teacher : _____ Date : _____

Compound Shapes

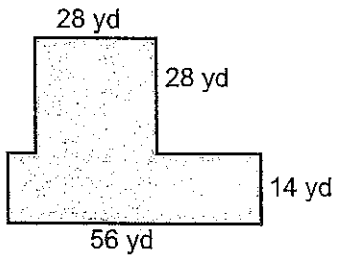
Find the area of each figure, round your answer to the nearest whole number if necessary.

1)



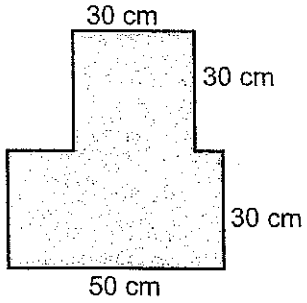
Area: _____

2)



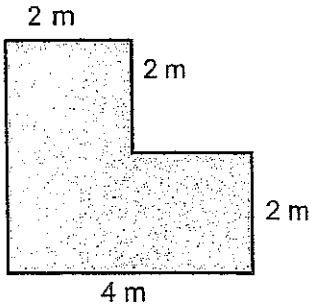
Area: _____

3)



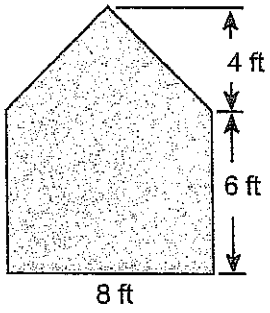
Area: _____

4)



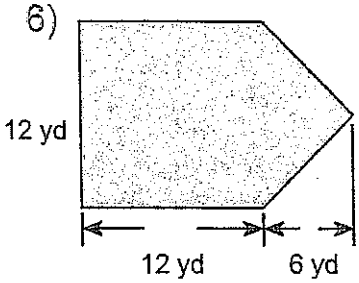
Area: _____

5)



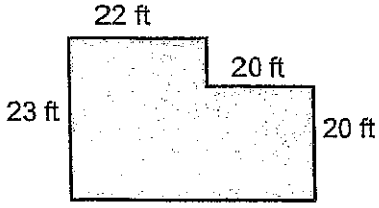
Area: _____

6)



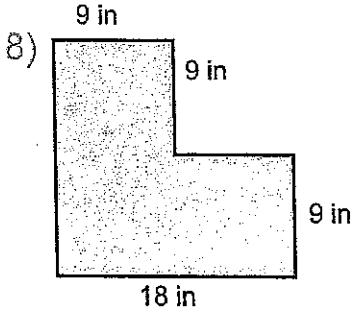
Area: _____

7)



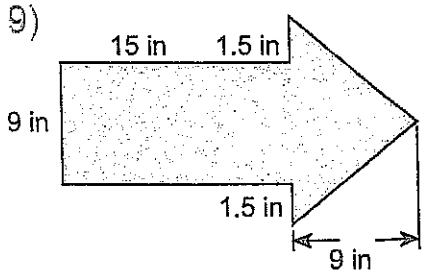
Area: _____

8)



Area: _____

9)



Area: _____

Performance Task 1

Walk, Don't Run

1. The Walking Club is one of the after-school activities at Jefferson Middle School. It consists of three groups of walkers. Each group walks at a different pace. All groups begin together and walk the same 4-mile trail.

   a. Wendy is new to the club. She asks each group how fast they walk. Each group gives the answer in a different way. Find the speed of each group in miles per hour.

   Group 1: We walk $2\frac{1}{2}$ miles per hour.

   Group 2: We walk a mile in 20 minutes.

   Group 3: We take 2 hours to walk the trail.

   b. Which group will finish first? Explain how you know.

   c. How long will it take Group 1 to complete the trail?

   d. If each group starts promptly at 2:30 P.M., what time will Group 2 finish?

Zesty Black Bean Salsa

2. The Chef's Club is making black bean salsa.

The recipe they are using has just two ingredients.

Zesty Black Bean Salsa
30 ounces canned black beans
16 ounces tomato salsa

a. Using the above recipe, how many ounces of black beans will be used for every ounce of tomato salsa?

b. The members of the club have decided that they will make $\frac{3}{4}$ of the recipe. How many ounces of black beans will they use? How many ounces of tomato salsa will they use?

c. Several members decide that they would like to try the recipe at home. They record the amounts of each ingredient that they will use.

Which members' black bean salsa will have the same ratio of beans to tomato salsa as the original recipe?

Name	Black Beans (ounces)	Tomato Salsa (ounces)
Jackson	8	10
Tamisha	20	$10\frac{2}{3}$
Logan	7.5	4
Samina	45	24
Lily	10	$5\frac{1}{3}$

d. Carrie decides to make a graph of the ordered pairs of numbers in the table in part c. She uses the x-axis to represent the number of ounces of black beans and the y-axis to represent the number of ounces of tomato salsa. Will all of the points lie on a straight line? Explain.

Copyright © by William H. Sadlier, Inc. All rights reserved.

Performance Task 1

Virtual Investments

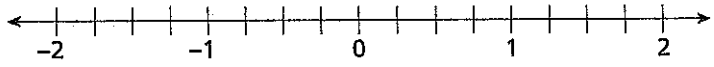
3. Each member of the Stock Market Club begins with $5,000 in virtual money. Each week, members compare their virtual portfolio values with other members of the club.

   Sophia buys shares in Fly Away Airlines. During the first week, the stock drops $0.75 (0.75 point) per share. During the second week, the stock goes up $0.50 (0.5 point) per share.

   a. What is the total change in points per share of Fly Away Airlines stock during the first two weeks?

   b. Explain why your answer to part a is positive or why it is negative.

   c. On the number line below, draw a point to represent the change in the first week and a point to represent the change in the second week.



   d. What is the difference between the change in the first week and the change in the second week? Explain how the number line in part c shows the difference.

   e. The stock market is open for trading 5 days per week, Monday through Friday. For the two-week period, what is the average change for Fly Away Airlines per day of trading?

Trivia Time

4. The Trivia Club is open to seventh and eighth graders only. Members practice weekly and participate in monthly competitions between the seventh and the eighth grade teams.

   a. There are a total of 45 club members. There are 25% more eighth graders than seventh graders. How many members are from each grade?

   b. During the first half of each monthly competition, each correct answer is worth 15 points. During the second half of the competition, each correct answer is worth 25 points. In this month's competition, the seventh grade team answers 30 questions correctly during the first half and has a total of 1,450 points at the end of the competition. How many questions does the team answer correctly during the second half?

      Let q equal the number of questions the team answered correctly during the second half. Write and solve an equation to solve the problem.

   c. Use substitution to check your solution to the equation you wrote in part b.

   d. Use the information from part b. In this month's competition, the eighth grade team scores 10% fewer points than the seventh grade team. How many points does the eighth grade team score?

Copyright © by William H. Sadlier, Inc. All rights reserved.

Performance Task 1

Digital Video Festival

6. Members of the Digital Video Club produce short videos. At the end of each school year, the club presents a Digital Video Festival at a local theater to show the community their 25 best videos.

   a. The club has learned from experience over the years that when they do not charge an admission fee, attendance is 800 people. For every dollar charged in admission, the attendance drops by 8 people. Write an inequality that can be used to find the price p in dollars that the club should charge so that at least 750 people will attend the film festival.

   b. Solve the inequality you wrote in part a.

   c. Explain in words what the solution to the inequality means in terms of the situation. Explain why the direction of the inequality sign in the solution makes sense.

   d. Use a number line to show the amount in dollars, p, that the club can charge and have at least 750 people attend the festival.