VISUAL 6.1

1/10	3/20	1/4	2/5	9/20	3/5	13/20	3/4	4/5	7/8

VISUAL 6.2 ▲ Answers to Activity 6.1

1. Use your skill in comparing fractions to convert each fraction in Options 2, 3, and 4 to percents.

   1/10 equals 10%   6/25 equals 24%   8/25 equals 32%

2. The way this works is when Josette borrows money to make a purchase she must pay for the use of someone else's money. This charge is called INTEREST on the amount borrowed. Interest is always reported as a percentage of the amount borrowed, and it is calculated on the basis of borrowing the money for one year. This type of interest is easy to calculate and is called SIMPLE INTEREST. Here is how to calculate the interest.

Interest	=	Amount Borrowed called Principal	X	Rate	X	Time
I	=	P	X	r	X	t

   I is the amount of interest, P is the amount borrowed, r is the percentage rate of interest, t is the time in years.

   Calculate the interest payment on each of the options below, using the formula of I=P times r times t.

   Option 1:   P = $650, r = 0%, t = 0
   Interest = ($650) (0) (0) = $0

   Option 2:   P = $650, r = 10%, t = 1/2 year
   Interest = ($650) (.10) (1/2) = $32.50

   Option 3:   P = $650, r = 24%, t = 1 year
   Interest = ($650) (.24) (1) = $156.00

   Option 4   P = $650, r = 32%, t = 1/3 year
   Interest = ($650) (.32) (.33) = $68.64

3. Calculate how long it will take Josette to pay off the money she owes and the interest for each option below:

   Option 1 (How many weeks will it take her to save for the new bike?) 10 Weeks

   Option 2: (How many weeks will it take to pay off the loan and the interest?) 10 Weeks

   Option 3: (How many weeks will it take to pay off the loan and the interest?) 12 Weeks

   Option 4: (How many weeks will it take to pay off the loan and the interest?) 11 Weeks

4. To help Josette make the decision on which option to choose, let's consider the good points of each option (we will call those BENEFITS) and the downside of each option (the COSTS). Record two Benefits and two Costs for each option.

Answers will vary and may include the following:

Option #1 Save for the Bike	Option #2 Borrow from Parents	Option #3 Borrow from the Association	Option #4 Borrow from the Dealer
Benefit #1 No interest	Benefit #1 Get the bike right now	Benefit #1 Get the bike right now	Benefit #1 Get the bike right now
Benefit #2 No debt obligation	Benefit #2 Low interest	Benefit #2 Can practice racing on new bike	Benefit #2 Bike may be free
Cost #1 Use old bike	Cost #1 Interest is $32.5	Cost #1 Interest is high at $156	Cost #1 Interest is really high at $208
Cost #2 Wait two months for bike	Cost #2 Money is tied up for 2-6 months	Cost #2 Money is tied up for 3-12 months	Cost #2 Money is tied up for $2\frac{1}{2}$-4 months

5. Based on the costs and benefits of each option, which option should Josette choose and why?

Answers will vary.

6. Are there any other options you can think of for Josette to consider in this situation?

Answers will vary. Students must justify their answers with the comparisons between costs and benefits.

VISUAL 6.3 ▲ Answers to Activity 6.2

1. Convert the following fractions to percents and rank them in order from smallest to largest.

5/16	**equals**	31.25
20/25	**equals**	80.00
3/7	**equals**	42.86
5/14	**equals**	35.71
1/2	**equals**	50.00
100/112	**equals**	89.29
625/400	**equals**	156.25
17/40	**equals**	42.50
50/50	**equals**	100.00
11/77	**equals**	14.29

2. Explain how percentages make it easy to compare fractions of unequal size:

   Percents convert fractions to a common base of 100 and make comparisons possible.

3. Make up your own story about a person who must make a decision about whether to pay cash or borrow money to purchase a product. Your story must have the following components:

   Type of product, interest rates, amount to be borrowed, time to pay back the loan, and three options.

   Scenarios will vary but must include a product, the amount to be borrowed, the rate of interest, the time to pay back the loan, and three possible options.