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Known throughout the country for motivating and engaging teachers and students, Brad has co-authored over a dozen books that provide easy-to-teach yet mathematically rich activities for busy teachers while teaching full time for over 30 years. In addition, he has co-authored over 40 teacher training manuals full of activities and ideas that help teachers who believe mathematics must be both meaningful and powerful.

**Seminar leader and trainer of mathematics teachers**
- 2005 California League of Middle Schools Educator of the Year
- California Math Council and NCTM national featured presenter
- Lead trainer for summer teacher training institutes
- Trainer/consultant for district, county, regional, and national workshops

**Author and co-author of mathematics curriculum**
- Simply Great Math Activities series: six books covering all major strands
- Angle On Geometry Program: over 400 pages of research-based geometry instruction
- Math Discoveries series: bringing math alive for students in middle schools
- Teacher training seminar materials handbooks for elementary, middle, and secondary school

**Available for workshops, keynote addresses, and conferences**
All workshops provide participants with complete, ready-to-use activities that require minimal preparation and give clear and specific directions. Participants also receive journal prompts, homework suggestions, and ideas for extensions and assessment.

*Brad’s math activities are the best I’ve seen in 38 years of teaching!*
  Wayne Dequer, 7th grade math teacher, Arcadia, CA

*“I can’t begin to tell you how much you have inspired me!”*
  Sue Bonesteel, Math Dept. Chair, Phoenix, AZ

*“Your entire audience was fully involved in math!! When they chatted, they chatted math. Real thinking!”*
  Brenda McGaffigan, principal, Santa Ana, CA

*Absolutely engaging. I can teach algebra to second graders!“*
  Lisa Fellers, teacher

References available upon request
Like my activities? How about giving me a favorable rating on the Teachers Pay Teachers website? Four stars would be much appreciated and would help me sleep better at night.

Like me even more? Then please don't make copies for your colleagues. I know it’s tempting when they say, “Wow! Groovy activity! Can I have a copy?” But this is how I make my money, and why are they still saying “groovy” anyway?

If we make copies for our friends, can we honestly tell our students not to copy or take things that don’t belong to them? (Ouch!)

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Thanks and happy teaching,

Brad 😊
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- b) Affordable staff development
- c) Ongoing staff development
- d) ALL OF THE ABOVE!

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♦ Effective because they are classroom-tested and classroom-proven. These popular DVDs of Brad’s trainings have been utilized by teachers throughout the country for years.

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Great DVD presentations offer quality mathematics staff development at a fraction of the cost!
Take Your Places: Part 2
Lessons 7 – 12

Overview:
This is a powerful lesson that enriches your students’ number sense and empowers their mathematical thinking. Each of the six lessons contains an activity master to use in class followed by two or three homework assignments. These will provide hours of classroom use, and of course you can easily design your own problem templates customized to the needs of your students. These six activities cover multiplication and division of fractions, order of operations, using parentheses, and the compound interest formula.

Procedure:
This file contains lessons 7–12 from the DVD Take Your Places. The video is a site-licensed product that can save your school money over purchasing individually licensed copies of this handout. The DVD contains the first six lessons in addition to the six that are included here. The video also demonstrates many teaching tips similar to those that are described below.

1. Pass out one of the activity masters to each student and state the goal. For example, in activity 7, your goal might be to maximize the product of the two fractions. Explain that you will draw a digit from a set of ten numbered 0–9. When you draw the number, they are to write it in one of the empty cells. The students may not change the location of the digit once they have recorded it. I like to have my students seated in pairs so that they can see that the rules are being followed. You may also choose to have them write in ink.

2. Ask them where they chose to write the digit and why. For example, if the goal is to maximize the product, numerators should be larger and denominators should be smaller, although I don’t tell them this. As they work, they will think about and discuss the number sense governing the problem and also consider the probability of drawing larger or smaller numbers.

3. Once everyone has recorded the digit, draw the second one. I like to keep the first digit removed so that it is not possible to draw it again. This forces students to reconsider the probability. For example, if the first draw was a 6, there is now only a \( \frac{3}{9} \) probability of drawing a larger digit (7, 8, or 9) since one of the ten original digits has been removed. The students should now record the second digit.

4. Draw the third digit and have the students record it in one of the two remaining cells.

5. Then draw a fourth digit and have the students record it in the final empty cell.

Required Materials:
- Counters numbered 0–9 or a spinner (provided)
- Activity and homework masters

Optional Materials:
- Calculators
6. Ask the students to calculate their problem and share responses. The number sense of this activity arises from three sources: the thinking and discussing the students do as they place their digits, the evolving probability that governs the process, and the questions you ask them to consider as they work. While the DVD goes into this final factor in great detail, here are some typical questions that will foster mathematical thinking:

a. Where did you place your digit, and why did you place it there?

b. What is the probability that the next digit is greater than 5?

c. Does it matter where you place your digit? Why?

d. Is it possible for two people to get the same final answer and not place their digits in the same locations?

e. How many different arrangements (or problems) can be made using these digits?

f. How many different answers can you get by rearranging your digits?

g. If you could rearrange your digits now that you know all four of them, what changes would you make?

h. What rules are helping you decide where you place your digits?

i. What are you learning about how to best play this game?

7. This game can be played as a warm up or extended into a whole class period. The value comes as students play the game multiple times. Then they see how the numbers are functioning in the problem. For example, some students may not realize at first that numerators should be larger than denominators to maximize a product or that order doesn’t matter in a multiplication problem. Number sense is built as we play with and work with numbers over a period of time to see how they behave.
Homework 7-A
The six problems are:
A \( \frac{9}{7} \times \frac{5}{4} = \frac{45}{28} = 1\frac{17}{28} \)
B \( \frac{7}{9} \times \frac{4}{5} = \frac{28}{45} \)
C \( \frac{9}{7} \times \frac{4}{5} = \frac{36}{35} = 1\frac{1}{35} \)
D \( \frac{7}{9} \times \frac{5}{4} = \frac{35}{36} \)
E \( \frac{9}{4} \times \frac{7}{5} = \frac{63}{20} = 3\frac{3}{20} \)
F \( \frac{4}{9} \times \frac{5}{7} = \frac{20}{63} \)

Homework 7-B
A \( \frac{a}{c} \times \frac{b}{d} \)
B \( \frac{a}{d} \times \frac{b}{c} \)
C \( \frac{b}{c} \times \frac{a}{d} \)
D \( \frac{b}{d} \times \frac{a}{c} \)
E \( \frac{c}{a} \times \frac{b}{d} \)
F \( \frac{a}{d} \times \frac{c}{a} \)

Homework 8-A
A \( \frac{3}{5} \div \frac{7}{8} = \frac{24}{35} \)
B \( \frac{7}{3} \div \frac{8}{5} = \frac{35}{24} = 1\frac{11}{24} \)
C \( \frac{3}{5} \div \frac{8}{7} = \frac{21}{40} \)
D \( \frac{5}{3} \div \frac{7}{8} = \frac{40}{21} = 1\frac{19}{21} \)
E \( \frac{3}{7} \div \frac{8}{5} = \frac{15}{56} \)
F \( \frac{7}{3} \div \frac{5}{8} = \frac{56}{15} = 3\frac{11}{15} \)

Homework 8-B
A \( \frac{a}{d} \div \frac{c}{b} \)
B \( \frac{b}{d} \div \frac{c}{a} \)
C \( \frac{a}{c} \div \frac{d}{b} \)
D \( \frac{b}{c} \div \frac{d}{a} \)
E \( \frac{b}{c} \div \frac{a}{d} \)
F \( \frac{c}{a} \div \frac{b}{d} \)

Homework 9-A
A \( 2(9 - 5) = 8 \)
B \( 2(5 - 9) = -8 \)
C \( 5(9 - 2) = 35 \)
D \( 5(2 - 9) = -35 \)
E \( 9(5 - 2) = 27 \)
F \( 9(2 - 5) = -27 \)

Homework 9-B
1 \( 3(5 - 7) = -6 \)
2 \( 5(3 - 7) = -20 \)
3 \( 7(3 - 5) = -14 \)
4 \( a(c - b) \)
5 \( b(a - c) \)
6 \( b(c - a) \)

Homework 10-A
A \( \frac{(7 - 3)}{2} = 2 \)
B \( \frac{(3 - 7)}{2} = -2 \)
C \( \frac{(7 - 2)}{3} = \frac{5}{3} = 1\frac{2}{3} \)
D \( \frac{(2 - 7)}{3} = -\frac{5}{3} = -1\frac{2}{3} \)
E \( \frac{(3 - 2)}{7} = \frac{1}{7} = 1\frac{2}{3} \)
F \( \frac{(2 - 3)}{7} = -\frac{1}{7} \)

Homework 10-B
1 \( (5 - 8)/9 = -\frac{3}{9} = -\frac{1}{3} \)
2 \( (8 - 9)/5 = -\frac{1}{5} \)
3 \( (5 - 9)/8 = -\frac{4}{8} = -\frac{1}{2} \)
4 \( (c - b)/a \)
5 \( (c - a)/b \)
6 \( (b - a)/c \)

Homework 11-A
1 \( 75 + 6(9 - 3) = 111 \)
2 \( 36 + 7(5 - 9) = 8 \)
3 \( 36 + 7(5 - 9) = 8 \)
36 + 5(9 − 7) = 46
73 + 6(9 − 5) = 97

Homework 11-B
1  95 + 0(7 − 6)
2  62 + 9(8 − 5)
3  46 + 1(8 − 7)
4  46 + 1(7 − 8)

Homework 12-A
1  $30,957.48
2  $61,914.95
3  $109,947.92
4  $119,795.66
5  $154,574.70
6  $356,525.07

Homework 12-B
1  \( i = 3, r = 1, t = 2 \)
2  \( i = 4, r = 5, t = 6 \)
3  \( i = 2, r = 4, t = 6 \)
4  \( i = 1, r = 5, t = 8 \)
5  In general, \( \text{time} \)
6  In general, \( \text{investment} \)
As your teacher calls out digits, place them in the empty boxes to achieve the goal. Once you write in a digit, it cannot be moved.

Goal: _______________________________
There are six different products than can be made using the four digits 4, 5, 7, and 9. Arrange the digits in the cells to get all twelve products.

A \[
\begin{array}{c}
\square \\
\square \\
\end{array}
\times \begin{array}{c}
\square \\
\square \\
\end{array} = 
\]

B \[
\begin{array}{c}
\square \\
\square \\
\end{array}
\times \begin{array}{c}
\square \\
\square \\
\end{array} = 
\]

C \[
\begin{array}{c}
\square \\
\square \\
\end{array}
\times \begin{array}{c}
\square \\
\square \\
\end{array} = 
\]

D \[
\begin{array}{c}
\square \\
\square \\
\end{array}
\times \begin{array}{c}
\square \\
\square \\
\end{array} = 
\]

E \[
\begin{array}{c}
\square \\
\square \\
\end{array}
\times \begin{array}{c}
\square \\
\square \\
\end{array} = 
\]

F \[
\begin{array}{c}
\square \\
\square \\
\end{array}
\times \begin{array}{c}
\square \\
\square \\
\end{array} = 
\]
The letters $a$, $b$, $c$, and $d$ are variables representing single digit numbers such that $a > b > c > d$. That is $a$ represents the digit of greatest value and $d$ represents the digit of least value.

1. Place the variables in the four cells to maximize the product. There are four ways to do this.

   A \[
   \begin{array}{c}
   \square \\
   \square
   \end{array}
   \times
   \begin{array}{c}
   \square \\
   \square
   \end{array}
   = \]

   C \[
   \begin{array}{c}
   \square \\
   \square
   \end{array}
   \times
   \begin{array}{c}
   \square \\
   \square
   \end{array}
   = \]

2. Place the variables in the four cells to minimize the product. There are four ways to do this.

   E \[
   \begin{array}{c}
   \square \\
   \square
   \end{array}
   \times
   \begin{array}{c}
   \square \\
   \square
   \end{array}
   = \]

   G \[
   \begin{array}{c}
   \square \\
   \square
   \end{array}
   \times
   \begin{array}{c}
   \square \\
   \square
   \end{array}
   = \]
As your teacher calls out digits, place them in the empty boxes to achieve the goal. Once you write in a digit, it cannot be moved.

Goal: ________________________________

A  \[ \frac{\square}{\square} \div \frac{\square}{\square} = \square \]

B  \[ \frac{\square}{\square} \div \frac{\square}{\square} = \square \]

C  \[ \frac{\square}{\square} \div \frac{\square}{\square} = \square \]

D  \[ \frac{\square}{\square} \div \frac{\square}{\square} = \square \]

E  \[ \frac{\square}{\square} \div \frac{\square}{\square} = \square \]

F  \[ \frac{\square}{\square} \div \frac{\square}{\square} = \square \]
There are SIX different quotients than can be made using the four digits 3, 5, 7, and 8. Arrange the digits in the cells to get all twelve quotients.

A \[ \frac{\Box}{\Box} \div \frac{\Box}{\Box} = \]

B \[ \frac{\Box}{\Box} \div \frac{\Box}{\Box} = \]

C \[ \frac{\Box}{\Box} \div \frac{\Box}{\Box} = \]

D \[ \frac{\Box}{\Box} \div \frac{\Box}{\Box} = \]

E \[ \frac{\Box}{\Box} \div \frac{\Box}{\Box} = \]

F \[ \frac{\Box}{\Box} \div \frac{\Box}{\Box} = \]
The letters $a$, $b$, $c$, and $d$ are variables representing single digit nonzero numbers such that $a > b > c > d$. That is $a$ represents the digit of greatest value and $d$ represents the digit of least value.

1. Place the variables in the four cells to **maximize** the quotient. There are four ways to do this.

   \[
   \begin{array}{cc}
   & \phantom{\overline{\phantom{.}}}
   \\
   & \phantom{\overline{\phantom{.}}}
   \\
   & \phantom{\overline{\phantom{.}}}
   \\
   & \phantom{\overline{\phantom{.}}}
   \\
   \hline
   & \phantom{\overline{\phantom{.}}}
   \\
   & \phantom{\overline{\phantom{.}}}
   \\
   & \phantom{\overline{\phantom{.}}}
   \\
   & \phantom{\overline{\phantom{.}}}
   \\
   \end{array}
   \div \phantom{\overline{\phantom{.}}}
   \frac{\phantom{\overline{\phantom{.}}}}{\phantom{\overline{\phantom{.}}}}
   =
   \]

2. Place the variables in the four cells to **minimize** the product. There are two ways to do this.

   \[
   \begin{array}{cc}
   & \phantom{\overline{\phantom{.}}}
   \\
   & \phantom{\overline{\phantom{.}}}
   \\
   & \phantom{\overline{\phantom{.}}}
   \\
   & \phantom{\overline{\phantom{.}}}
   \\
   \hline
   & \phantom{\overline{\phantom{.}}}
   \\
   & \phantom{\overline{\phantom{.}}}
   \\
   & \phantom{\overline{\phantom{.}}}
   \\
   & \phantom{\overline{\phantom{.}}}
   \\
   \end{array}
   \div \phantom{\overline{\phantom{.}}}
   \frac{\phantom{\overline{\phantom{.}}}}{\phantom{\overline{\phantom{.}}}}
   =
   \]

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As your teacher calls out digits, place them in the empty boxes to achieve the goal. Once you write in a digit, it cannot be moved.

Goal: __________________________________________

A \[ \Box (\Box - \Box) = \]

B \[ \Box (\Box - \Box) = \]

C \[ \Box (\Box - \Box) = \]

D \[ \Box (\Box - \Box) = \]

E \[ \Box (\Box - \Box) = \]

F \[ \Box (\Box - \Box) = \]
There are six different answers than can be made using the three digits 2, 5, and 9. Arrange the digits in the cells to get all six answers. Some answers will be negative.

A \[ (\Box - \Box) = \]

B \[ (\Box - \Box) = \]

C \[ (\Box - \Box) = \]

D \[ (\Box - \Box) = \]

E \[ (\Box - \Box) = \]

F \[ (\Box - \Box) = \]
Use the digits 7, 5, and 3. There are three ways to arrange the digits to get answers that are negative. Show them here.

1. \[\square (\square - \square) = \]
2. \[\square (\square - \square) = \]
3. \[\square (\square - \square) = \]

The letters \(a\), \(b\), and \(c\) are variables representing single digit nonzero numbers such that \(a > b > c\). That is \(a\) represents the digit of greatest value and \(c\) represents the digit of least value.

There are six possible arrangements of these three variables in this activity. They are listed here:

\[
\begin{align*}
& a (b - c) \\
& b (a - c) \\
& c (a - b) \\
& a (c - b) \\
& b (c - a) \\
& c (b - a)
\end{align*}
\]

4. Which of these will give negative answers? ________________________________

5. Which will give the greatest answer? ______________________________________

6. Which will give the least answer? ______________________________________
As your teacher calls out digits, place them in the empty boxes to achieve the goal. Once you write in a digit, it cannot be moved.

Goal: ________________________________

A

\[
\begin{array}{c}
\hline
A \\
\hline
\end{array}
\quad - \\
\begin{array}{c}
\hline
\hline
\end{array}
\quad B \\
\hline
\begin{array}{c}
\hline
C
\end{array}
\]

= \\

B

\[
\begin{array}{c}
\hline
A \\
\hline
\end{array}
\quad - \\
\begin{array}{c}
\hline
\hline
\end{array}
\quad B \\
\hline
\begin{array}{c}
\hline
C
\end{array}
\]

= \\

C

\[
\begin{array}{c}
\hline
A \\
\hline
\end{array}
\quad - \\
\begin{array}{c}
\hline
\hline
\end{array}
\quad B \\
\hline
\begin{array}{c}
\hline
C
\end{array}
\]

= \\

D

\[
\begin{array}{c}
\hline
A \\
\hline
\end{array}
\quad - \\
\begin{array}{c}
\hline
\hline
\end{array}
\quad B \\
\hline
\begin{array}{c}
\hline
C
\end{array}
\]

= 
There are six different answers than can be made using the three digits 7, 3, and 2. Arrange the digits in the cells to get all six answers. Some answers will be negative.

A  
\[ \underline{\text{7}} \underline{\text{3}} \underline{\text{2}} = \]

B  
\[ \underline{\text{7}} \underline{\text{3}} \underline{\text{2}} = \]

C  
\[ \underline{\text{7}} \underline{\text{3}} \underline{\text{2}} = \]

D  
\[ \underline{\text{7}} \underline{\text{3}} \underline{\text{2}} = \]

E  
\[ \underline{\text{7}} \underline{\text{3}} \underline{\text{2}} = \]

F  
\[ \underline{\text{7}} \underline{\text{3}} \underline{\text{2}} = \]
The letters $a$, $b$, and $c$ are variables representing single digit nonzero numbers such that $a > b > c$. That is $a$ represents the digit of greatest value and $c$ represents the digit of least value.

There are six possible arrangements of these three variables in this activity. Write the three that will result in negative answers.

4. ______________________

5. ______________________

6. ______________________

Use the digits 9, 8, and 5. There are three ways to arrange the digits to get answers that are negative. Show them here.

1. $\Box - \Box = \Box$

2. $\Box - \Box = \Box$

3. $\Box - \Box = \Box$

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As your teacher calls out digits, place them in the empty boxes to achieve the goal. Once you write in a digit, it cannot be moved.

Goal:________________________________________

A

\[ \underline{\square} + \underline{\square} (\underline{\square} - \underline{\square}) = \]

B

\[ \underline{\square} + \underline{\square} (\underline{\square} - \underline{\square}) = \]

C

\[ \underline{\square} + \underline{\square} (\underline{\square} - \underline{\square}) = \]

D

\[ \underline{\square} + \underline{\square} (\underline{\square} - \underline{\square}) = \]

E

\[ \underline{\square} + \underline{\square} (\underline{\square} - \underline{\square}) = \]
Place the digits 3, 5, 6, 7, and 9 into the five cells to satisfy each condition.

1. Find the greatest possible solution.

\[
\begin{array}{c}
\boxed{\phantom{3}} \\
\boxed{\phantom{5}} \\
\end{array}
\ +
\begin{array}{c}
\boxed{\phantom{6}} \\
\boxed{\phantom{7}} \\
\end{array}
\ =
\begin{array}{c}
\boxed{\phantom{3}} \\
\boxed{\phantom{5}} \\
\end{array}
\ -
\begin{array}{c}
\boxed{\phantom{9}} \\
\boxed{\phantom{6}} \\
\end{array}
\]

2. Find the least solution.

\[
\begin{array}{c}
\boxed{\phantom{3}} \\
\boxed{\phantom{5}} \\
\end{array}
\ +
\begin{array}{c}
\boxed{\phantom{6}} \\
\boxed{\phantom{7}} \\
\end{array}
\ =
\begin{array}{c}
\boxed{\phantom{3}} \\
\boxed{\phantom{5}} \\
\end{array}
\ -
\begin{array}{c}
\boxed{\phantom{9}} \\
\boxed{\phantom{6}} \\
\end{array}
\]

3. Find the answer nearest to 0.

\[
\begin{array}{c}
\boxed{\phantom{3}} \\
\boxed{\phantom{5}} \\
\end{array}
\ +
\begin{array}{c}
\boxed{\phantom{6}} \\
\boxed{\phantom{7}} \\
\end{array}
\ =
\begin{array}{c}
\boxed{\phantom{3}} \\
\boxed{\phantom{5}} \\
\end{array}
\ -
\begin{array}{c}
\boxed{\phantom{9}} \\
\boxed{\phantom{6}} \\
\end{array}
\]

4. Find the answer nearest to 50.

\[
\begin{array}{c}
\boxed{\phantom{3}} \\
\boxed{\phantom{5}} \\
\end{array}
\ +
\begin{array}{c}
\boxed{\phantom{6}} \\
\boxed{\phantom{7}} \\
\end{array}
\ =
\begin{array}{c}
\boxed{\phantom{3}} \\
\boxed{\phantom{5}} \\
\end{array}
\ -
\begin{array}{c}
\boxed{\phantom{9}} \\
\boxed{\phantom{6}} \\
\end{array}
\]

5. Find the answer nearest to 100.

\[
\begin{array}{c}
\boxed{\phantom{3}} \\
\boxed{\phantom{5}} \\
\end{array}
\ +
\begin{array}{c}
\boxed{\phantom{6}} \\
\boxed{\phantom{7}} \\
\end{array}
\ =
\begin{array}{c}
\boxed{\phantom{3}} \\
\boxed{\phantom{5}} \\
\end{array}
\ -
\begin{array}{c}
\boxed{\phantom{9}} \\
\boxed{\phantom{6}} \\
\end{array}
\]
Take Your Places
Homework 11-B

Use the given digits to hit each target answer.

1. 0, 5, 6, 7, 9
   \[ \square \square + \square \quad (\square - \square) = 95 \]

2. 2, 5, 6, 8, 9
   \[ \square \square + \square \quad (\square - \square) = 89 \]

3. 1, 4, 6, 7, 8
   \[ \square \square + \square \quad (\square - \square) = 47 \]

4. 1, 2, 3, 8, 9
   \[ \square \square + \square \quad (\square - \square) = 45 \]

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Investors use the *compound interest formula* to predict how much money they will earn over a period of time. The general formula is:

\[ p = i (1 + r)^t \]

In the formula, \( p \) stands for principle: the total amount of money you will earn. The \( i \) represents the amount of your investment. Today you will be investing a multiple of $1,000. The \( r \) is the interest rate you earn written as a decimal in hundredths. Lastly \( t \) represents the time the money is invested in years. Today you will be investing for a multiple of ten years.

Your teacher will select three random digits. Place them one at a time in the three blanks for investment, rate, and time. Then calculate your principle. Your goal is to *maximize* your money.

A \[ \underline{\phantom{00000}} = \underline{\phantom{0000}},000(1 + .0\underline{\phantom{0000}})^0 \]

B \[ \underline{\phantom{0000}} = \underline{\phantom{0000}},000(1 + .0\underline{\phantom{0000}})^0 \]

C \[ \underline{\phantom{0000}} = \underline{\phantom{0000}},000(1 + .0\underline{\phantom{0000}})^0 \]

D \[ \underline{\phantom{0000}} = \underline{\phantom{0000}},000(1 + .0\underline{\phantom{0000}})^0 \]

E \[ \underline{\phantom{0000}} = \underline{\phantom{0000}},000(1 + .0\underline{\phantom{0000}})^0 \]
Solve the problems to find the principle of each investment.

1. \[
\text{principle} = \text{investment} \cdot (1.\text{rate})^{\text{time}}
\]

Investment: $8,000
Rate: 7%
Time: 20 years

2. \[
\text{principle} = \text{investment} \cdot (1.\text{rate})^{\text{time}}
\]

Investment: $16,000
Rate: 7%
Time: 20 years

3. \[
\text{principle} = \text{investment} \cdot (1.\text{rate})^{\text{time}}
\]

Investment: $8,000
Rate: 14%
Time: 20 years

4. \[
\text{principle} = \text{investment} \cdot (1.\text{rate})^{\text{time}}
\]

Investment: $8,000
Rate: 7%
Time: 40 years

5. \[
\text{principle} = \text{investment} \cdot (1.\text{rate})^{\text{time}}
\]

Investment: $9,650
Rate: 8.5%
Time: 34 years

6. \[
\text{principle} = \text{investment} \cdot (1.\text{rate})^{\text{time}}
\]

Investment: $9,650
Rate: 11.2%
Time: 34 years
Place the given digits in each problem below in order to maximize your principle.

1. \[ \underline{\text{1, 2, 3}} = \underline{\text{\$\,000}}(1 + \underline{\text{.0\_}})\underline{0} \]
   - principle
   - investment
   - rate
   - time

2. \[ \underline{\text{4, 5, 6}} = \underline{\text{\$\,000}}(1 + \underline{\text{.0\_}})\underline{0} \]
   - principle
   - investment
   - rate
   - time

3. \[ \underline{\text{1, 5, 8}} = \underline{\text{\$\,000}}(1 + \underline{\text{.0\_}})\underline{0} \]
   - principle
   - investment
   - rate
   - time

5. In general, what variable tends to maximize your principle: investment, rate, or time? 

6. Which seems to be least important?
To use the spinners, set a paper clip on the center of a spinner. Place a pencil point on the center and spin the paper clip as shown.
If you liked this activity, you might also like some of the other character education lessons available in my TeachersPayTeachers store. Simply search for “Brad Fulton”.

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Feel free to contact me if you have questions or comments or would like to discuss a staff development training or keynote address at your site.

Happy teaching,

**Brad**