# "Math is Cool" Championships – 2004-05
## Sponsored by: Western Polymer Corporation & Wenatchee Valley Clinic
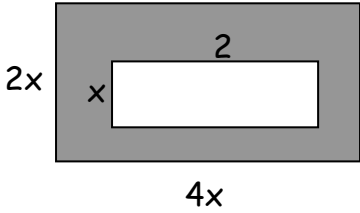## 7th & 8th Grade – October 22, 2004
## Individual Contest

Express all answers as reduced fractions unless stated otherwise.
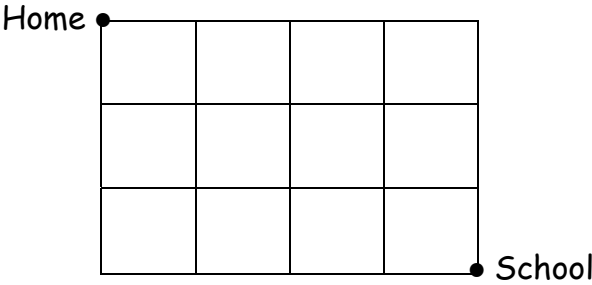
Leave answers in terms of π where applicable.

Do not round any answers unless stated otherwise.

Record all answers on the colored cover sheet.

| | |
|---|---|
| 1 | Princess Fiona notices that a candle she lit two hours ago is now 8 inches tall. After burning for another hour, the candle is 7.25 inches tall. If the candle is burning at a constant rate, how tall, in inches, was it when she first lit the candle? |
| 2 | Round 321.456987 to the nearest ten-thousandth. |
| 3 | Solve for x: 5(2x - 4) = 2(4x + 7) |
| 4 | Biff Jr. bought some donuts at 10¢ each. He ate 2 of them and sold the rest at 15¢ each. His profit was $1.50. How many donuts did he buy? |
| 5 | Simplify: 8 - ⁻3 + 4(2 - 7) + 4 |
| 6 | What is the value of 30 divided by one-half? |
| 7 | Find the arithmetic mean of the following number set: {-10, 9, -8, 7, -6, 5, -4, 3, -2} |
| 8 | What is the side length of a rectangle with area 48 and width 6? |
| 9 | A cube has a volume of 125 cubic centimeters. What is the length of a side of the cube, in centimeters? |
| 10 | Express $.\overline{27}$ as a common fraction. |
| 11 | Biff and Eho are running a 5000 meter race around a track that is 400 meters long. If Biff runs an average of one lap per minute, and Eho runs at half Biff's speed, how long will it take Eho to finish the race, in minutes? |
| 12 | Convert 25 degrees Celsius to degrees Fahrenheit. $F = \dfrac{9}{5}C + 32$ |
| 13 | What is the length of the diameter of a circle whose area is $\pi^3$? |
| 14 | Two supplementary angles are in a ratio of $4\dfrac{1}{2}:3$. What is the measure of the larger angle? |

| 15 | The perimeter of an isosceles triangle is 150 inches. The length of the base is 32 inches. A square has a perimeter equal to one of the congruent sides of the triangle. What is the length of one side of the square, in inches? Express your answer as a mixed number. |
|---|---|
| 16 | True or false: All squares are rhombi. |
| 17 | What is the slope of a line that is perpendicular to the line with equation 7x-2y=13? |
| 18 | After 2/3 of the boys left a school dance, the ratio of girls to boys was 9:5. Then 21 girls left, and the ratio became 3:4. How many students total remained at the dance? |
| 19 | What is the probability of drawing the queen of hearts, followed by the king of spades, from a deck of 52 playing cards? |
| 20 | What base 2 numeral is 3 more than $154_6$ ? |
| 21 | In terms of $x$, find the area of the shaded region and express the answer as a polynomial.<br><br>2x × x, 4x, 2 (rectangle diagram) |
| 22 | Tara's school bus travels 20 miles uphill at an average speed of 10 mph, and 20 miles downhill at an average speed of 50 mph. How many hours does it take the bus to complete the trip? Express your answer as a mixed number. |
| 23 | If Gracie has 5 shirts, 4 pairs of pants, and 6 pairs of shoes, how many different outfits can she wear? |
| 24 | Amy, Bob, Carrie, Daniel, Emma, and Fred are all on the math team. How many ways can a three-person team be chosen from their group? |
| 25 | What is the measure, in degrees, of one exterior angle of a pentagon? |
| 26 | What percent of 9 divided by $\frac{1}{2}$ is 9 times $\frac{1}{2}$ ? |
| 27 | Express $\dfrac{4+8+12+16+20+24+28}{7+14+21+28+35+42+49}$ as a common fraction. |
| 28 | How many subsets of the set $\{1,2,3,4,5\}$ contain the number 5? |
| 29 | A space diagonal of a cube is $7\sqrt{3}$. What is the surface area of the cube? |

# Challenge Questions

| | |
|---|---|
| 30 | A goat is tied to the corner of a rectangular barn which has dimensions 40 feet by 80 feet.  Assuming that the rope is 50 feet long, what is the maximum area that the goat can graze in feet squared? |
| 31 | Mr. Brown randomly returned test papers to the 24 students in his class.  What is the probability that exactly 23 of the students received their own paper? |
| 32 | How many cookies, measuring 3 inches in radius, can be cut from a circle of dough measuring 9 inches in radius, assuming that dough between cookies is not reused? |
| 33 | A cube is painted blue and then cut into 64 congruent cubes.  How many of these cubes are painted blue on at least two faces? |
| 34 | In the multiplication problem shown, a 5-digit number with hundreds digit 3 is multiplied by 7.  The result is a 5-digit number with thousands digit $e$.  Each letter represents a digit.  What is the value of $a+b+c+d+e$?        ab,3cd•7= 8e,415 |
| 35 | What is the number of square units in the area bounded by the graphs of $y = \lvert x \rvert - 2$ where $-2 \le x \le 2$, and $x^2 + y^2 = 4$ where $y \ge 0$ ? |
| 36 | How many degrees apart are the minute hand and hour hand of an analog clock at 2:05:30? Express answer as a decimal. |
| 37 | At the student store, it costs $4.25 for a notebook and a pen, $4.00 for a notebook and a protractor, and $7.00 for 2 notebooks and a pen.  How much does one notebook cost, in dollars? |
| 38 | Kristina travels east or south to get to school.  What is the total number of different paths she could take?

Home •

• School |
| 39 | 12 balls are numbered 1-12.  4 balls are then selected at random without replacement.  What is the probability that the sum of the numbers on those 4 balls is odd? |
| 40 | The areas of 3 distinct faces of a rectangular prism are 24, 32, and 48.  What is the number of cubic centimeters in the volume of the prism? |

# "Math is Cool" Championships – 2004-05
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## Wenatchee Valley Clinic
### 7th & 8th Grade – October 22, 2004
### Individual Multiple Choice Contest

At Newman's Fruit Tree Nursery, Pauline Newman sells fruit trees and tree fertilizers.  The following is a selection of her young fruit trees and her liquid fertilizers.  Assume fertilizers cannot be sold in fractions of a container and the fertilizers work for any tree.

| Tree | Cost ($) | | Fertilizer | Cost ($) | Container Amount | Amount recommended per tree per month |
|------|----------|---|-----------|----------|-----------|-----------|
| Pear | 4.00 | | GroFast | 7.00 | 5 gallons | 1/128 gal |
| Apple | 3.50 | | Tree++ | 10.00 | 8 gallons | 1/64 gal |
| Orange | 5.00 | | Pinnacle | 20.00 | 15 gallons | 1/100 gal |
| Cherry | 4.50 | | Spurt | 15.00 | 10 gallons | 1/50 gal |
| Peach | 6.00 | | | | | |

| | |
|---|---|
| 1 | Which tree is the most expensive to purchase?<br><br>A) Pear        B) Apple        C) Orange    D) Cherry    E) Peach |
| 2 | Josh went to Newman's Fruit Tree Nursery and purchased the following.  8 apple trees, 12 orange trees, 90 peach trees,  10 gallons of Grofast, and 30 gallons of spurt.  What was Josh's total bill?<br><br>A) $687       B) $1112       C) $852       D) $971       E) Answer not given |
| 3 | Of the liquid fertilizers, which is the most expensive per gallon?<br><br>A) GroFast   B) Tree++     C) Pinnacle   D) Spurt      E) Both Pinnacle and Spurt |
| 4 | How many gallons of Growfast fertilizer would a farmer need to buy to fertilize 800 trees for 6 months?<br><br>A) 15 gallons B) 25 gallons C) 40 gallons D) 53.5 gallons   E) Answer not given |
| 5 | Newman's fruit tree orchard has 1000 of the least expensive type of fruit trees. Farmer Newman wants to buy enough Pinnacle fertilizer for three months. How much would this cost in dollars?<br><br>A) $3520      B) $3530      C) $3540      D) $3560      E) Answer not given |

| 6 | What is the cost of Spurt fertilizer per tree each day?  Assume a month is 30 days long. <br><br> A) .1 cents    B) 1 cent      C) 1/2250 dollars     D) 90 cents         E) .40 dollars |
|---|---|
| 7 | Colin bought a combination of 50 gallons of Spurt and GroFast for a total of $73.00.  What is the ratio of containers of Spurt to containers of GroFast? <br><br> A) 23/77      B) 3/4         C) 77/23      D) 4/3        E) Answer not given |
| 8 | Assuming the mixture of Pinnacle is 70% fertilizer, how much water should a farmer add to 8 gallons of Pinnacle fertilizer to create a mixture of only 35% Pinnacle fertilizer? <br><br> A) 5 gallons  B) 6 gallons  C) 7 gallons  D) 8 gallons  E) Answer not given |
| 9 | Robert wants to buy 6 fruit trees for his house.  As long as each tree is an apple, pear, or peach tree, he doesn't care how many of each he has.  How many different combinations of fruit trees could he select? <br><br> A) 39          B) 31          C) 66          D) 28          E) 23 |

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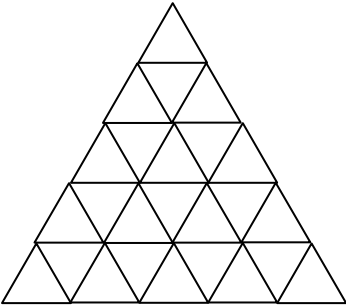### 7th – 8th Grade – October 22, 2004
### Team Contest

Express all answers as reduced fractions unless stated otherwise.

Leave answers in terms of π where applicable.

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Record all answers on the colored cover sheet.

| | |
|---|---|
| 1 | What is the sum of all the multiples of 13 between 50 and 250? |
| 2 | Joe wants to mount as many 3 inch by 5 inch pictures as possible to a piece of cardboard 29 inches by 33 inches.  How many pictures can he mount on the cardboard without cutting them? |
| 3 | Anne's petting zoo has Cobras (zero legs and one head each), Tarantulas (eight legs and zero heads each), and gremlins (two legs and one head each).  When I visit, I count 138 legs and 50 heads.  If the number of Gremlins is one less than twice the number of Cobras, which is one less than twice the number of Tarantulas, what is the total number of animals? |
| 4 | How many triangles appear in the figure?  |
| 5 | You wish to paint the exteriors of twenty-seven cubic building blocks with three-inch edges.  If you must apply two coats of paint to all surfaces, and one ounce of paint is enough to cover thirty-six square inches (once), how many ounces of paint will be needed? |
| 6 | What is the probability that you get a king and two queens when you draw three cards from a standard fifty-two card deck? |
| 7 | What is the largest prime number that is a factor of 20,097? |
| 8 | Farmers use 90 pounds of wheat per acre when seeding a grain field.  Farmer Felgenhuaer used 180,360 pounds of wheat to seed his fields.  How many acres did he seed? |
| 9 | Danielle is going to buy two gumballs each for Sam and Anthea.  However, Sam demands that he and Anthea get identical sets of gumballs (i.e. if Sam gets a red and a yellow, Anthea must also).  If the gumball machine dispenses gumballs randomly and contains one red gumball, two blue gumballs, three green gumballs, and four yellow gumballs, what is the largest number of gumballs Danielle must be willing to purchase? |
| 10 | What is the total surface area, in square centimeters, of a right circular cylinder with a base radius of nine centimeters and a volume of $324\pi$ cubic centimeters? |

# "Math is Cool" Championships – 2004-05
## Sponsored by: Western Polymer Corporation & Wenatchee Valley Clinic
7th & 8th Grade – October 22, 2004
Pressure Round Contest

| | |
|---|---|
| 1 | A circle has the same numeric value for its area and circumference. What is the radius, greater than zero, of the circle? |
| 2 | A weighted coin lands heads up 70% of the time.  What is the probability of getting exactly two heads when you toss this coin four times?  Express your answer as a decimal. |
| 3 | Find the exact perimeter, in centimeters, of a right triangle with legs equal to 1.666… centimeters and 4 centimeters, respectively. |
| 4 | RATS and STAR are 4-digit numbers in which each letter represents the same digit wherever it occurs and different letters represent different digits.  If RATS divided by 4 is equal to STAR, what number does STAR represent? |
| 5 | When Daniel is "It" in playing Hide and Seek, he counts in base 10 by 5s (5, 10, 15, …).  When Elizabeth is "It", she counts in base 8 by 4s (4, …).  Write in base 8 the 10th number Elizabeth says. |

# "Math is Cool" Championships – 2004-05
## Sponsored by:  Western Polymer Corporation &
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### 7th & 8th Grade – October 22, 2004
### Mental Math Contest

Express all answers as reduced fractions in terms of radicals and π where applicable, unless stated otherwise.

| PERSON 1 | | |
|---|---|---|
| 1.1 | What is the sum of the first seven odd natural numbers? | 49 |
| 1.2 | What is the area of a square with side length 9? | 81 |
| 1.3 | How many odd numbers are between 8 and 22? | 7 |
| 1.4 | What is the area of a right triangle with legs of length 8 and 17? | 68 |
| **PERSON 2** | | |
| 2.1 | What is the sum of negative four, negative seven and 5? | -6 |
| 2.2 | What is the 8th positive odd integer? | 15 |
| 2.3 | If today is Tuesday, what day will it be 94 days from today? | Friday |
| 2.4 | What is 22 percent of 11? Express as a decimal. | 2.42 |
| **PERSON 3** | | |
| 3.1 | What is the greatest common factor of 18 and 81? | 9 |
| 3.2 | If I have a total of 17 nickels and dimes which have a total value of 95 cents, how many dimes do I have? | 2 [dimes] |
| 3.3 | There are ostriches and llamas in a field.  There are a total of 14 heads and 34 feet.  How many ostriches are there? | 11 [ostriches] |
| 3.4 | A telephone pole cast a shadow of 42 feet long.  A girl 5 feet tall standing next to the pole casts a shadow 10 feet long.  How many feet tall is the pole, in feet? | 21 [feet] |
| **PERSON 4** | | |
| 4.1 | During a sale, shoes are reduced in price by 20%.  One kind of shoes usually sells for $30.  What is the sale price, in dollars, of these shoes? | [$] 24 |
| 4.2 | A hamburger has twice as many calories as a cup of soup.  Together they have 495 calories.   How many calories does the cup of soup have? | 165 [calories] |
| 4.3 | What is the least common multiple of 37 and 14? | 518 |
| 4.4 | How many non-distinct prime factors does 88 have? | 4 |

# "Math is Cool" Championships – 2004-05
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### 7th Grade – October 22, 2004

## COLLEGE KNOWLEDGE BOWL ROUND #1

| # | Problem | Answer |
|---|---------|--------|
| 1 | Solve for y: $y^2 + 18 = 27$ | y = ±3 |
| 2 | Evaluate: twenty-five squared minus sixteen squared. | 369 |
| 3 | Using only the digits 1 through 9, with repetition allowed, how many 3 digit numbers can be made that are divisible by 5? | 81 |
| 4 | David and Brandt are doing math problems. David can do 25 problems in an hour and Brandt can do 20 per hour. How many math problems can they do if they work together for 4 hours assuming they will be distracted from their work 1/3 of the time? | 120[math problems] |
| 5 | If Biff and Eho together have 84 rattlesnakes, but Biff has 20 more rattlesnakes than Eho, how many rattlesnakes does Eho have? | 32 [snakes] |
| 6 | Find the number of terminal zeros in the product of the first 25 <u>even</u> positive integers. | 6 [zeros] |
| 7 | Ben is 6 feet tall. At a certain time of day he casts an eight-foot shadow. If the shadow of a tree at the same time of day is forty feet, how tall is the tree in feet? | 30 [ft] |
| | Extra Problem – Only if Needed | |
| 8 | What is the 13th prime number? | 41 |

# "Math is Cool" Championships – 2004-05
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### 7th Grade – October 22, 2004

## COLLEGE KNOWLEDGE BOWL ROUND #2

| # | Problem | Answer |
|---|---------|--------|
| 1 | In the 6-digit number "eight seven <u>x</u> four nine zero", the <u>x</u> stands for a digit. If this number is divisible by 33, what is <u>x</u>? | 5 |
| 2 | What is 5 factorial plus the geometric mean between 5 and 80? | 140 |
| 3 | How many ways can the letters in the word 'SEVEN' be arranged? | 60 |
| 4 | If the 8th term of an arithmetic sequence is 72 and the 10th term is 66, what is the 5th term? | 81 |
| 5 | Find the common fraction equivalent to $83\frac{1}{3}\%$. | 5/6 |
| 6 | What is the sum, in degrees, of the interior angles of a heptagon? | 900[°] |
| 7 | If the point (5, -1) is shifted 10 units to the left and 10 units up, give the coordinates of its new location. | (-5, 9) |
| 7.1 | Extra Problem – Only if Needed | |
| 8 | What is the length of the line segment from (2,7) to (5,11)? | 5 |

# "Math is Cool" Championships – 2004-05
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### 7th Grade – October 22, 2004

## COLLEGE KNOWLEDGE BOWL ROUND #3

| # | Problem | Answer |
|---|---------|--------|
| 1 | Alex has 2 brothers. His brother Owen is now 3 years younger than twice Alex's age. Alex is one year older than his brother Seth. Owen is 5 years older than Seth. How old, in years, is Alex right now? | 7 [years] |
| 2 | What is the surface area of a rectangular prism with edges of lengths 4, 3, and 7? | 122 |
| 3 | What is the slope of the line passing through (8, 3) and (2, 1)? | 1/3 |
| 4 | Many people are walking their dogs in a park. Nine pairs of tennis shoes and a total of 74 feet are hitting the pavement. How many dogs are being walked? | 14 [dogs] |
| 5 | If the ratio of girls to guys in Math Team is 4 to 3, and there are more than 20 students in Math Team, what is the smallest number of girls there could be? | 12 [girls] |
| 6 | A square of side length 6 inches is folded in half to form a rectangle, then in half again to form a square. What is the area, in square inches, of this final square? | 9 [in$^2$] |
| 7 | What is the sum of the first 35 positive odd integers? | 1225 |
| | Extra Problem – Only if Needed | |
| 8 | If $x^3$ = -216, what is x? | -6 |

# "Math is Cool" Championships – 2004-05

## Sponsored by: Western Polymer Corporation
### 8th Grade – October 22, 2004

### COLLEGE KNOWLEDGE BOWL ROUND #1

| # | Problem | Answer |
|---|---------|--------|
| 1 | A regular hexagon has side lengths of 6. What is the area of the hexagon? | $54\sqrt{3}$ |
| 2 | What is the distance between the origin and the point (8, 15)? | 17 |
| 3 | What is the slope of a line with the equation 8x over 3 plus 2y equals 24? | - 4/3 |
| 4 | On a 40 question multiple-choice test, there are 4 choices for questions 1 through 20 and 5 choices for questions 21 through 40. What is the number of questions that someone who randomly guesses would most likely get correct? | 9 [questions] |
| 5 | Sampson is flipping a quarter 3 times. What are the odds in favor of getting exactly 2 heads? | 3:5 |
| 6 | Triscia has a rectangular picture of Hearst Castle that she wants to frame. The dimensions of the picture are 12 inches by 18 inches The frame she has to fit this picture in, is three inches wide. What is the outside perimeter of the frame in inches? | 84 [inches] |
| 7 | Two trains are departing from a station from two different side-by-side tracks. The first departs at noon at a constant speed of 75mph. The second train departs at 1:30 PM and travels at a speed of 90mph. What time would the second train catch up to the first train? | 9:00 PM |
|  | Extra Problem – Only if Needed |  |
| 8 | What is the volume of a sphere with a diameter of 12? | 288π |

## COLLEGE KNOWLEDGE BOWL ROUND #2

| # | Problem | Answer |
|---|---------|--------|
| 1 | What is the length of a diagonal of a rectangle with sides of length 10 and 24? | 26 |
| 2 | Find the value for k so that x + 2y + 8 – 3k = 0 has an x-intercept of –2. | 2 |
| 3 | Solve for x in the equation 5x + 2 = 3x + 88 | 43 |
| 4 | What is the sum of the first 5 prime numbers divided by 4? | 7 |
| 5 | N times N equals 1156. Solve for N. | 34 or -34 [both answers required] |
| 6 | The ratio of boys to girls is 8 to 7. If a total of 135 boys and girls are present, how many girls are present? | 63 [girls] |
| 7 | Mrs. Miller made a blueberry pie for her family of 12 people. In the night, Biff and Eho steal $\frac{1}{4}$ of the pie. If the remainder of the pie is divided evenly among the 12 family members, how much of the original pie will they each receive? | 1/16[of the pie] |
| | Extra Problem – Only if Needed | |
| 8 | The measure of the interior angles of a triangle are in the ratio of 9 to 5 to 4. What is the difference, in degrees, between the measure of the largest angle and the measure of the smallest angle? | 50[°] |

## COLLEGE KNOWLEDGE BOWL ROUND #3

| # | Problem | Answer |
|---|---------|--------|
| 1 | Caleb is similar to David.    David's arm length is 24 inches while Caleb's is 18 inches.  David's height is 64 inches while Caleb's is 48 inches.  If Caleb's feet are 12 cm long, how long are David's feet in centimeters? | 16 [cm] |
| 2 | What is the sum of the reduced numerator and denominator of eighteen divided by 54? | 4 |
| 3 | How many diagonals can be drawn in a regular 15 sided polygon? | 90 [diagonals] |
| 4 | How many factors does 60 have? | 12 [factors] |
| 5 | Three cards are drawn, without replacement, from a deck of cards. Find the probability that all 3 cards are black. | 2/17 |
| 6 | A circle is inscribed in a square of side length 20. What is the area of the circle? | 100π |
| 7 | Find the area of a rhombus with diagonals of lengths 10 and 35. | 175 |
| | Extra Problem – Only if Needed | |
| 8 | In baseball, batting average is the decimal expansion of the number of hits a batter gets divided by the number of at bats the batter gets, rounded to the nearest thousandth.  If Josh had a batting average of .469 last season and he had 98 at bats, how many hits did he get last season? | 46 [hits] |

# "Math is Cool" Championships – 2004-05

Sponsored by:  Western Polymer Corporation & Wenatchee Valley Clinic

7th & 8th Grade – October 22, 2004

Individual Contest

**Individual Contest – Score Sheet**

DO NOT WRITE IN SHADED REGIONS

| | Answer | 1 or 0 | 1 or 0 | | | Answer | 1 or 0 | 1 or 0 |
|---|---|---|---|---|---|---|---|---|
| 1 | 9.5 [inches] | | | | 21 | $8x^2 - 2x$ | | |
| 2 | 321.4570 | | | | 22 | 2  2/5 [hour] | | |
| 3 | 17 | | | | 23 | 120 [outfits] | | |
| 4 | 36[donuts] | | | | 24 | 20 [ways] | | |
| 5 | -5 | | | | 25 | 72 [°] | | |
| 6 | 60 | | | | 26 | 25 [%] | | |
| 7 | -2/3 | | | | 27 | 4/7 | | |
| 8 | 8 | | | | 28 | 16 | | |
| 9 | 5 [cm] | | | | 29 | 294 | | |
| 10 | 3/11 | | | | 30 | $1900\pi$  [ft$^2$] | | |
| 11 | 25 [minutes] | | | | 31 | 0 | | |
| 12 | 77 [°] | | | | 32 | 7 [cookies] | | |
| 13 | $2\pi$ | | | | 33 | 32 [cubes] | | |
| 14 | 108[°] | | | | 34 | 18 | | |
| 15 | 14 3/4[inches] | | | | 35 | $2\pi$+4 [units$^2$] | | |
| 16 | True | | | | 36 | 29.75 [°] | | |
| 17 | -2/7 | | | | 37 | [$]2.75 | | |
| 18 | 35 [students] | | | | 38 | 35 [paths] | | |
| 19 | 1/2652 | | | | 39 | 16/33 | | |
| 20 | 1001001[2] | | | | 40 | 192 [cm$^3$] | | |
| | | | | | | | | |

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### 7th & 8th Grade – October 22, 2004
### Individual Multiple Choice Contest

**Correct responses are worth 2 points, incorrect responses are worth -1 point and no response is 0 points.**

**DO NOT WRITE IN SHADED REGIONS**

| | Answer | -1, 0 or 2 | -1, 0 or 2 |
|---|---|---|---|
| 1 | E | | |
| 2 | A | | |
| 3 | D | | |
| 4 | C | | |
| 5 | C | | |
| 6 | A | | |
| 7 | B | | |
| 8 | D | | |
| 9 | D | | |
| | | | |

# "Math is Cool" Championships – 2004-05

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Wenatchee Valley Clinic
7th – 8th Grade – October 22, 2004
Team Contest

## DO NOT WRITE IN SHADED REGIONS

| | Answer | 1 or 0 | 1 or 0 |
|---|---|---|---|
| 1 | 2392 | | |
| 2 | 63 [pictures] | | |
| 3 | 59 [animals] | | |
| 4 | 48 [triangles] | | |
| 5 | 81[ounces] | | |
| 6 | 6/5525 | | |
| 7 | 29 | | |
| 8 | 2004[acres] | | |
| 9 | 7[gumballs] | | |
| 10 | $234\pi$ | | |
| | | | |

# "Math is Cool" Championships – 2004-05
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7th & 8th Grade – October 22, 2004

**Pressure Round Answers**

|   | Answer |
|---|--------|
| 1 | 2 |
| 2 | 0.2646 |
| 3 | 10 [cm] |
| 4 | 2178 |
| 5 | $50_{[8]}$ |