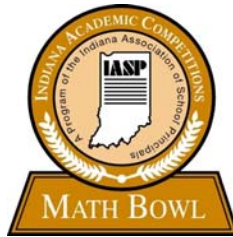


PURDUE
UNIVERSITY
**Indiana Academic
M.A.T.H. Bowl**



AREA February 22, 2018

**Begin
Practice
Round**

$$6(0) = ?$$

A. 0

B. 1

C. 6

D. 60

$$6(0) = ?$$

A. 0



End
Practice
Round

Begin
Round
One

Which expression is not equal to 87?

A. $392 - 303$

B. $9^2 + 6$

C. $120 \div 2 + 3 \times 9$

D. $15 - 5 + (7 \times 11)$

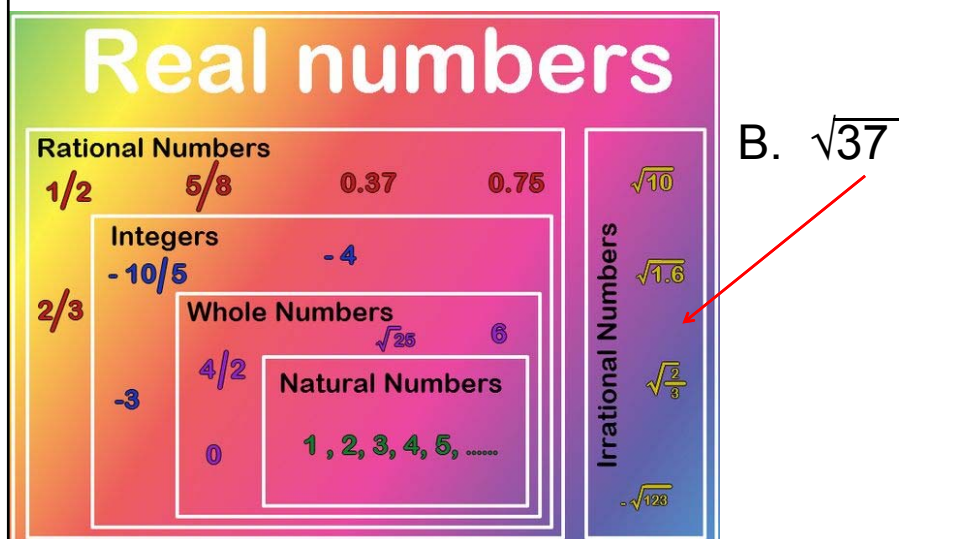
Which expression is not equal to 87?

A. $392 - 303$

Which number is not rational?

- A. 5
- B. $\sqrt{37}$
- C. 0.49
- D. $(2/3)^2$

Which number is not rational?



We know 1 mile is 5,280 feet. Which expression would represent the number of revolutions a car tire with a circumference of n feet makes when it travels 2 miles?

- A. $5,280 \div n$
- B. $(5,280 \times n) \times 2$
- C. $(5,280 \times n) \div 2$
- D. $(5,280 \div n) \times 2$



We know 1 mile is 5,280 feet. Which expression would represent the number of revolutions a car tire with a circumference of n feet makes when it travels 2 miles?

- D. $(5,280 \div n) \times 2$



Susan was a softball pitcher who was very good at striking out batters. Her freshman year, she struck out 68 batters. The next year, she struck out 92. Give the percent of increase to the nearest tenth of a percent in her strikeout numbers.

- A. 26.1%
- B. 35.2%
- C. 35.3%
- D. 36%



Susan was a softball pitcher who was very good at striking out batters. Her freshman year, she struck out 68 batters. The next year, she struck out 92. Give the percent of increase to the nearest tenth of a percent in her strikeout numbers.

Percent of increase is $\frac{\text{amount of change}}{\text{Original}} = \frac{x}{100}$

C. 35.3%



$$\frac{92 - 68}{68} = \frac{x}{100}$$

$$\frac{24}{68} = \frac{x}{100}$$

$$68x = 2400$$

$$x = 35.29411765$$

A football helmet was discounted 30%. If the regular price of the helmet is \$85, what is the sale price?

- A. \$25.50
- B. \$59.50
- C. \$70.00
- D. \$55.00



A football helmet was discounted 30%. If the regular price of the helmet is \$85, what is the sale price?

B. \$59.50



A 30% discount means we pay 70%.
 $0.70(85) = \$59.50$

The sales tax on a pair of dress pants was \$3.15. If the sales tax was 7%, what was the cost of the pants before taxes?

- A. \$40
- B. \$45
- C. \$50
- D. \$55



The sales tax on a pair of dress pants was \$3.15. If the sales tax was 7%, what was the cost of the pants before taxes?

B. \$45



$$\begin{aligned}\text{Let } x &= \text{price (cost) of pants} \\ 7\% \text{ of cost} &= \$3.15 \\ 0.07x &= 3.15 \\ (0.07x)/0.07 &= 3.15/0.07 \\ x &= 45\end{aligned}$$

Which item would cost the least?

- A. An \$18 jersey at 50% off.
- B. A \$10 toy at 5% off.
- C. A \$15 hat at 15% off.
- D. A \$20 book at 25% off.

Which item would cost the least?

- A. An \$18 jersey at 50% off

$$\$18(0.50) = \$9.00$$

$$\$10(0.95) = \$9.50$$

$$\$15(0.85) = \$12.75$$

$$\$20(0.75) = \$15.00$$

A math competition consists of 20 questions. Each question is worth either 4 or 5 points. The total number of points available is 84. Sally is able to correctly solve all the 4-point questions and half of the 5-point questions. What is her score?

- A. 70
- B. 71
- C. 72
- D. 74



A math competition consists of 20 questions. Each question is worth either 4 or 5 points. The total number of points available is 84. Sally is able to correctly solve all the 4-point questions and half of the 5-point questions. What is her score?

One solution is to check the given answers.
 $84 - 70 = 14$ which is not a multiple of 5

$84 - 71 = 13$, again not a multiple of 5

$84 - 72 = 12$, still not a multiple of 5

D. 74 $84 - 74 = 10$ so she missed 2 five-point questions



End
Round
One

Begin
Round
Two

Which quotient is incorrect?

A. $5 \div 2 = 2 \text{ R } 1$

B. $5 \div 2 = 2.5$

C. $5 \div 2 = 2\frac{1}{2}$

D. $5 \div 2 = 2/5$

Which quotient is incorrect?

D. $5 \div 2 = 2/5$

$5 \div 2 = 5/2$ is correct, not $2/5$

Sara brought all the money (n) she got for her birthday to the clothing store. She spent \$50 on a dress then found \$18 on the road on her way back home. Which expression does not represent the amount of money she has now?

- A. $n - 32$
- B. $n - 50 + 18$
- C. $n - (50 + 18)$
- D. $(n - 50) + 18$



Sara brought all the money (n) she got for her birthday to the clothing store. She spent \$50 on a dress then found \$18 on the road on her way back home. Which expression does not represent the amount of money she has now?

- C. $n - (50 + 18)$

The parentheses cause the found money to be subtracted instead of added.



Mrs. Martin wants to put her students in groups with the same number of students in each group. If she puts them in groups of two or three, there is one student left alone. If they are grouped by 5's, no one is left alone. How many students are in this class?

- A. 10
- B. 15
- C. 20
- D. 25



Mrs. Martin wants to put her students in groups with the same number of students in each group. If she puts them in groups of two or three, there is one student left alone. If they are grouped by 5's, no one is left alone. How many students are in this class?

~~$10 \div 2 = 5 \text{ R } 0$~~

$10 \div 3 = 3 \text{ R } 1$

$10 \div 5 = 2 \text{ R } 0$

$15 \div 2 = 7 \text{ R } 1$

~~$15 \div 3 = 5 \text{ R } 0$~~

$15 \div 5 = 3 \text{ R } 0$

~~$20 \div 2 = 10 \text{ R } 0$~~

~~$20 \div 3 = 6 \text{ R } 2$~~

$20 \div 5 = 4 \text{ R } 0$

D. 25

$25 \div 2 = 12 \text{ R } 1$

$25 \div 3 = 8 \text{ R } 1$

$25 \div 5 = 5 \text{ R } 0$



Jeff opened up a college savings account for his daughter Reese. The account earned \$30.15 during the year. If the bank paid 3% annual interest, how much money was in Reese's account at the beginning of the year?

- A. \$1030.15
- B. \$1005.00
- C. \$974.85
- D. \$33.15



Jeff opened up a college savings account for his daughter Reese. The account earned \$30.15 during the year. If the bank paid 3% annual interest, how much money was in Reese's account at the beginning of the year?

- B. \$1005.00

$$\begin{aligned} I &= prt \\ 30.15 &= 0.03(1)p \\ P &= \$1,005 \end{aligned}$$



Which expression represents the average of 4 consecutive odd numbers where n is the smallest number?

A. $(4n + 16) \div 4$

B. $(4n + 12) \div 4$

C. $4n + (16 \div 4)$

D. $4n + (12 \div 4)$

Which expression represents the average of 4 consecutive odd integers where n is the smallest integer?

B. $(4n + 12) \div 4$

Let n = smallest odd number

$n + 2$ = second odd integer

$n + 4$ = third odd integer

$n + 6$ = largest odd integer

Sum is $n + (n + 2) + (n + 4) + (n + 6)$

Or $4n + 12$.

Thus, average is $(4n + 12) \div 4$

Extra note: average is $n + 3$, the number between the second and third integer.

A semi truck driver pulled off the interstate to go through the scales. On the scales, the truck and its load weighed 24,800 pounds. If the load on the truck weighs 14,200 pounds more than the truck, how much does the load weigh in pounds?

- A. 10,600
- B. 15,500
- C. 19,000
- D. 19,500



A semi truck driver pulled off the interstate to go through the scales. On the scales, the truck and its load weighed 24,800 pounds. If the load on the truck weighs 14,200 pounds more than the truck, how much does the load weigh in pounds?

D. 19,500



Let x = weight of truck in pounds
 $x + 14,200$ = weight of load

$$x + x + 14,200 = 24,800$$

$$2x + 14,200 = 24,800$$

$$\begin{array}{r} -14,200 \\ -14,200 \\ \hline \end{array}$$

$$2x = 10,600$$

$$(2x)/2 = 10,600/2$$

$$x = 5,300$$

$$x + 14,200 = 5,300 + 14,200$$

Load weighs 19,500

Jack's computer weighs twice as much as John's computer. John's computer weighs three times as much as Jace's computer. Jace's computer weighs half as much as Chris' computer, which weighs four pounds. Place the computers in order from heaviest to lightest.

- A. Jack, John, Chris, Jace
- B. John, Jack, Jace, Chris
- C. Jace, Chris, John, Jack
- D. Chris, Jace, Jack, John



Jack's computer weighs twice as much as John's computer. John's computer weighs three times as much as Jace's computer. Jace's computer weighs half as much as Chris' computer, which weighs four pounds. Place the computers in order from heaviest to lightest.

- A. Jack, John, Chris, Jace



Chris' computer weighs 4 pounds
Jace's computer weighs half that or 2 pounds
John's computer weighs 3 times 2 pounds or 6 pounds
Jack's computer weighs twice John's or 12 pounds

Farmer McDonald had pigs, cows, horses, and sheep on his farm. The number of pigs is 30% of the number of cows. The number of horses is 12.5% the number of cows. The number of sheep is 12.5% the number of pigs. If the total number of animals is 234, how many cows are there?

- A. 175
- B. 170
- C. 165
- D. 160



Farmer McDonald had pigs, cows, horses, and sheep on his farm. The number of pigs is 30% of the number of cows. The number of horses is 12.5% the number of cows. The number of sheep is 12.5% the number of pigs. If the total number of animals is 234, how many cows are there?



Let x = number of cows
 $0.3x$ = number of pigs
 $0.125x$ = number of horses
 $0.125(0.3x)$ = number of sheep
 $x + 0.3x + 0.125x + 0.125(0.3x) = 234$
 $1.4625x = 234$
 $x = 160$ cows

D. 160

Or since number of horses is $12.5\% = \frac{1}{8}$ number of cows, number of cows must be divisible by 8. Only 160 is divisible by 8.

End
Round
Two

Begin
Round
Three

Find the best definition of a variable.

- A. A constant part of an equation.
- B. A number added to an unknown.
- C. The answer to a tough question.
- D. An unknown, often shown as a letter or blank, in an equation.

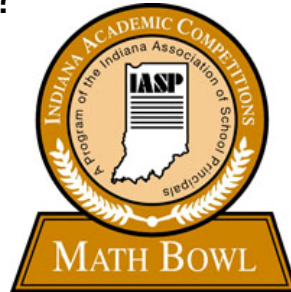
Find the best definition of a variable.

- D. An unknown, often shown as a letter or blank, in an equation.

For example, the variable in $9x + 8 = 53$ is the x .

Math Bowl is a contest with four rounds of eight questions each. Last year, the highest scoring YELLOW class team scored a 24. What percent of the total did that team answer correctly?

- A. 24
- B. 32
- C. 0.75
- D. 75



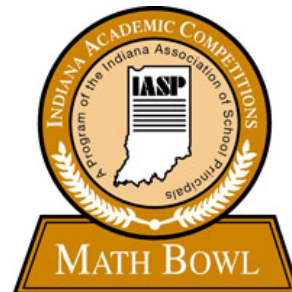
Math Bowl is a contest with four rounds of eight questions each. Last year, the highest scoring YELLOW class team scored a 24. What percent of the total did that team answer correctly?

D. 75

$$\frac{\text{\# correct}}{\text{Total possible}} = \frac{24}{32}$$

$$24 \div 32 = 0.75$$

Write as a percent, 75%.



Order $\frac{3}{4}$, $\frac{5}{9}$, and $\frac{1}{2}$ from least to greatest.

- A. $\frac{3}{4}$, $\frac{5}{9}$, $\frac{1}{2}$
- B. $\frac{5}{9}$, $\frac{3}{4}$, $\frac{1}{2}$
- C. $\frac{1}{2}$, $\frac{3}{4}$, $\frac{5}{9}$
- D. $\frac{1}{2}$, $\frac{5}{9}$, $\frac{3}{4}$



Order $\frac{3}{4}$, $\frac{5}{9}$, and $\frac{1}{2}$ from least to greatest.

- D. $\frac{1}{2}$, $\frac{5}{9}$, $\frac{3}{4}$

Use LCD of 36 or decimals

$$\frac{1}{2} = \frac{18}{36} \text{ or } 0.5$$

$$\frac{5}{9} = \frac{20}{36} \text{ or } 0.5555\dots$$

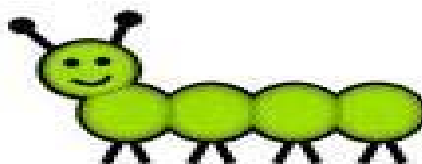
$$\frac{3}{4} = \frac{27}{36} \text{ or } 0.75$$



What are the next four numbers in the pattern?

47, 50, 42, 45, 37, 40, 32, ...

- A. 35, 27, 32, 20
- B. 25, 27, 20, 12
- C. 35, 27, 30, 22
- D. 25, 22, 20, 12

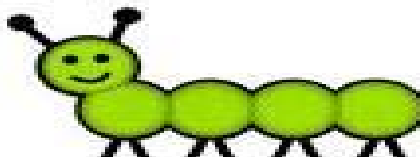


What are the next four numbers in the pattern?

47, 50, 42, 45, 37, 40, 32, ...

$$\begin{aligned}47 + 3 &= 50 \\50 - 8 &= 42 \\42 + 3 &= 45 \\45 - 8 &= 37 \\37 + 3 &= 40 \\40 - 8 &= 32 \\32 + 3 &= 35 \\35 - 8 &= 27 \\27 + 3 &= 30 \\30 - 8 &= 22\end{aligned}$$

C. 35, 27, 30, 22



Half of a number is equal to twice the number minus 84. What is the number?

- A. 62
- B. 60
- C. 58
- D. 56

Half of a number is equal to twice the number minus 84. What is the number?

D. 56

Let x = the number

$$x/2 = 2x - 84$$

$$2(x/2) = 2(2x - 84)$$

$$x = 4x - 168$$

$$-x = -x$$

$$0 = 3x - 168$$

$$x = 168/3$$

$$x = 56$$

Greg has taken 6 tests. He received scores of 95%, 84%, 98%, 89%, 92%, and 83%. What score will give Greg an average score of 90% on all 7 tests combined, rounded to the nearest percent?

- A. 92%
- B. 90%
- C. 86%
- D. All of the above



Greg has taken 6 tests. He received scores of 95%, 84%, 98%, 89%, 92%, and 83%. What score will give Greg an average score of 90% on all 7 tests combined, rounded to the nearest percent?

D. All of the above

$95 + 84 + 98 + 89 + 92 + 83 = 541$ points, $541/6 = 90.1666$
We know 90% will preserve the 90% average.

$$(541 + 92) \div 7 \approx 90.428571$$

$$(541 + 86) \div 7 \approx 89.571427$$

Both answers round to 90% making all 3 answers correct.



A punch recipe is made with 5 parts lemonade and 7 parts orange juice. If Kathy's punch bowl can hold 60 cups of punch, how much lemonade should she put in?

- A. 20
- B. 23
- C. 24
- D. 25



A punch recipe is made with 5 parts lemonade and 7 parts orange juice. If Kathy's punch bowl can hold 60 cups of punch, how many cups of lemonade should she put in?

D. 25

Lemonade = $5x$
Orange Juice $7x$

$$\begin{aligned} 5x + 7x &= 60 \\ 12x &= 60 \\ (12x)/12 &= 60/12 \\ x &= 5 \text{ cups} \\ \text{Lemonade is } 5(5) &= 25 \text{ cups} \end{aligned}$$



The distance between Daleville and Smithville is 304 miles. Jeff heads from Smithville to Daleville at 55 mph and Wes travels from Daleville to Smithville at 40 mph. If they leave at 9:00 a.m., at what time will they meet on the road? Remember that one hour has 60 minutes.

- A. 12:00 p.m.
- B. 12:12 p.m.
- C. 12:20 p.m.
- D. 12:30 p.m.



The distance between Daleville and Smithville is 304 miles. Jeff heads from Smithville to Daleville at 55 mph and Wes travels from Daleville to Smithville at 40 mph. If they leave at 9:00 a.m., at what time will they meet on the road? Remember that one hour has 60 minutes.

- B. 12:12 p.m.



Jeff travels $55t$ miles.
 Wes travels $40t$ miles.
 Together, they travel 304 miles.
 $55t + 40t = 304$
 $95t = 304$
 $(95t)/95 = 304/95$
 $T = 3.2$ hours
 2 tenths of an hour is 12 minutes so they
 Meet 3 hours 12 minutes after they left or
 At 12:12 p.m.

End
Round
Three

Begin
Round
Four

If a shirt and tie together cost \$140 and the tie cost t dollars, which expression would represent the cost of the shirt?

- A. $140 - t$
- B. $t - 140$
- C. $140 + t$
- D. not given



If a shirt and tie together cost \$140 and the tie cost t dollars, which expression would represent the cost of the shirt?

A. $140 - t$

Shirt plus tie is \$140
Shirt + t = 140
Shirt = $140 - t$



Find the sum of $\frac{1}{2} + \frac{1}{3} + 0.25 + 0.2$

- A. $1 \frac{17}{60}$
- B. $\frac{4}{14}$
- C. $\frac{4}{6}$
- D. 1.333333333

Find the sum of $\frac{1}{2} + \frac{1}{3} + 0.25 + 0.2$

- A. $1 \frac{17}{60}$

Using a calculator may result in an answer of 1.28333333, which is not given as a choice.

Working in fractions we get $\frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5}$, with a LCD of 60.

Thus, we add $\frac{30}{60} + \frac{20}{60} + \frac{15}{60} + \frac{12}{60} = \frac{77}{60}$ or $1 \frac{17}{60}$.

The earth has a circumference of 25,000 miles.
How would that number be written using
scientific notation?

- A. 25×10^4
- B. 2.5×10^4
- C. 25×10^3
- D. 2.5×10^3



The earth has a circumference of 25,000 miles.
How would that number be written using
scientific notation?

- B. 2.5×10^4

Scientific Notation is a number
greater than or equal to one but
less than ten, times a power of 10.
The power of ten tells us how many
places to move the decimal point.



What must n equal to make the equation true?

$$\frac{2}{n} + \frac{3}{n} + \frac{4}{n} = 1$$

A. 8

B. 9

C. 10

D. 12

What must n equal to make the equation true?

$$\frac{2}{n} + \frac{3}{n} + \frac{4}{n} = 1$$

B. 9

You could use your fraction capable calculator to test each answer.

OR

Multiply both sides of equation by n and use distributive property.

$$\begin{aligned} n(2/n + 3/n + 4/n) &= 1n \\ 2 + 3 + 4 &= n \\ 9 &= n \end{aligned}$$

Dan thought the discount on a new riding mower was 40%, when it was really 35%. If Dan calculated the discount as \$52.70, what was the amount of the correct discount?

- A. \$50.07
- B. \$46.11
- C. \$47.70
- D. \$60.23



Dan thought the discount on a new riding mower was 40%, when it was really 35%. If Dan calculated the discount as \$52.70, what was the amount of the correct discount?

B. \$46.11

Let x = regular price
 $0.4x = 52.70$
 $x = \$131.75$ regular price

$0.35(131.75) = \$46.11$ correct discount



A race car driver's average speed was 200 mph during the first hour of the race, 180 mph during the second hour, and 210 mph during the third hour. If the average of 4 hours is 198.75 mph, what is the average speed during the fourth hour, given in mph?

- A. 201
- B. 202
- C. 203
- D. 205



A race car driver's average speed was 200 mph during the first hour of the race, 180 mph during the second hour, and 210 mph during the third hour. If the average of 4 hours is 198.75 mph, what is the average speed during the fourth hour, given in mph?

D. 205

$4(198.75) = 795$ miles in the race
First 3 hours, the car travelled
 $200 + 180 + 210 = 590$ miles

$795 - 590 = 205$ miles in the last hour



Average Daily Wind Speeds For a Week in Indiana, given in miles per hour.

S	M	T	W	Th	F	S
12	9	2	6	11	9	20

Find the mean, range, and mode, respectively.

- A. 10, 18, 9
- B. 9, 10, 18
- C. 12, 20, 10
- D. 9, 18, 10

Average Daily Wind Speeds For a Week in Indiana, given in miles per hour.

S	M	T	W	Th	F	S
12	9	2	6	11	9	20

Find the mean, range, and mode, respectively.

A. 10, 18, 9

The numbers in numerical order are:
2, 6, 9, 9, 11, 12, 20

This gives us the mode is 9 so A must be the answer.

To check, the range is $20 - 2 = 18$.
The mean is $69/7 \approx 9.857142$ or about 10.

Tom is 3 times Sue's age. Emily is 5 years older than Sue and 5 years younger than Bob. Ann is 3 times as old as Sue. The total of all five ages is 87. How old is Tom?

- A. 24
- B. 21
- C. 18
- D. 13



Tom is 3 times Sue's age. Emily is 5 years older than Sue and 5 years younger than Bob. Ann is 3 times as old as Sue. The total of all five ages is 87. How old is Tom?

- A. 24

Tom	Sue	Emily	Bob	Ann	total
24	8	13	18	24	87 ✓
21	7	12	17	21	78 ✗
18	6	11	16	18	69 ✗
13	4 1/3	9 1/3	14 1/3	13	54 ✗



End
Round
Four

Begin
Round
Alternate

Clayton and Dalton were playing basketball. If Clayton made 8 of his 20 total shots, what percentage of the shots did he make?

- A. 3%
- B. 6%
- C. 25%
- D. 40%



Clayton and Dalton were playing basketball. If Clayton made 8 of his 20 total shots, what percentage of the shots did he make?

D. 40%

Successes
Attempts

$8/20$ is 0.4 or

$40/100$ or 40%



A garden's length is 3 times its width. The width is a multiple of 10 feet. If fence comes in 10 foot sections, which expression represents the number of sections needed to put a fence around the garden where n = width in feet?

- A. $6n \div 10$
- B. $8n \div 10$
- C. $10n \div 10$
- D. $12n \div 10$



A garden's length is 3 times its width. The width is a multiple of 10 feet. If fence comes in 10 foot sections, which expression represents the number of sections needed to put a fence around the garden where n = width in feet?

- B. $8n \div 10$

n



n

$3n$

Fence is put on the perimeter.
Perimeter is sum of the sides.
 $P = n + 3n + n + 3n$
Perimeter is $8n$.

The town of Clarksville wants to build a new elementary school. To do so, they must vote to pass a bond to raise \$8 million. The bond passes if over 60% of the voters vote yes. If 5,613 votes were cast, how many votes must be yes for the bond to pass?

- A. 3,368
- B. 3,367
- C. 3,369
- D. 3,370



The town of Clarksville wants to build a new elementary school. To do so, they must vote to pass a bond to raise \$8 million. The bond passes if over 60% of the voters vote yes. If 5,613 votes were cast, how many votes must be yes for the bond to pass?

- A. 3,368

$0.60(5,613) = 3,367.8$
So 3,368 or more must have voted yes.



The Math Contest started at 12:00 and ran for 232 minutes. We know 1 hour is 60 minutes. What time did the contest end?

- A. 12:32
- B. 4:52
- C. 3:00
- D. 3:52



The Math Contest started at 12:00 and ran for 232 minutes. We know 1 hour is 60 minutes. What time did the contest end?

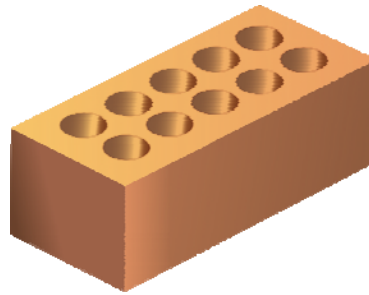
- D. 3:52

$$232 \div 60 = 3 \text{ hours } 52 \text{ minutes}$$



The weight of 4 bricks plus 20 pounds is equal to the weight of 6 bricks minus 16 pounds. What is the weight of one brick in pounds?

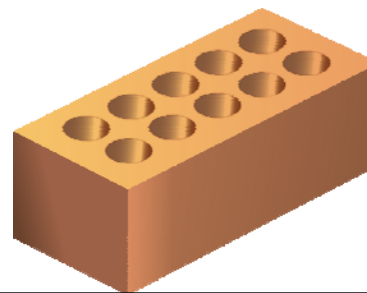
- A. 17
- B. 18
- C. 19
- D. 20



The weight of 4 bricks plus 20 pounds is equal to the weight of 6 bricks minus 16 pounds. What is the weight of one brick in pounds?

- B. 18

$$\begin{aligned}\text{Let } x &= \text{weight of one brick} \\ 4x + 20 &= 6x - 16 \\ 4x + 20 - 4x &= 6x - 16 - 4x \\ 20 &= 2x - 16 \\ 20 + 16 &= 2x - 16 + 16 \\ 36 &= 2x \\ 36/2 &= 2x/2 \\ x &= 18\end{aligned}$$



The price of a horse saddle is 15% of the cost of a horse. If the total cost of the horse and saddle is \$1437.50, what's the cost of the saddle?

- A. \$187.50
- B. \$200.50
- C. \$210.50
- D. \$215.50



The price of a horse saddle is 15% of the cost of a horse. If the total cost of the horse and saddle is \$1437.50, what's the cost of the saddle?

- A. \$187.50

Let x = cost of the horse
 $0.15x$ = cost of the saddle

Cost of horse + saddle is 1,437.50

$$x + 0.15x = 1,437.50$$

$$1.15x = 1,437.50$$

$$(1.15x)/1.15 = 1,437.50/1.15$$

$$x = 1,250$$

$$0.15x = 187.5$$



To change from Celsius to Fahrenheit:
Multiply the Celsius reading by 1.8. Then add
32 to the product. Round to the nearest whole
number, if needed. What is the Fahrenheit
reading if the Celsius reading is 33°?



- A. 91° Fahrenheit
- B. 90° Celsius
- C. 59° Fahrenheit
- D. 60° Fahrenheit

To change from Celsius to Fahrenheit:
Multiply the Celsius reading by 1.8. Then add
32 to the product. Round to the nearest whole
number, if needed. What is the Fahrenheit
reading if the Celsius reading is 33°?

A. 91° Fahrenheit

$$\begin{aligned} 33(1.8) &= 59.4 \\ 59.4 + 32 &= 91.4 \\ 91.4 &\approx 91 \end{aligned}$$



A swimmer swam a total of 175 laps over the course of a week. Every day he swam 5 more laps than the day before. How many laps did he swim on the last day?

- A. 25
- B. 30
- C. 35
- D. 40



A swimmer swam a total of 175 laps over the course of a week. Every day he swam 5 more laps than the day before. How many laps did he swim on the last day?

D. 40



Day	Laps
1	x
2	x + 5
3	x + 10
4	x + 15
5	x + 20
6	x + 25
7	x + 30
Total	7x + 105

$$7x + 105 = 175$$

$$\begin{array}{r} -105 \quad -105 \\ 7x = 70 \end{array}$$

$$(7x) \div 7 = 70 \div 7$$

$$x = 10 \text{ laps on day 1}$$

$$x + 30 = 40 \text{ laps last day}$$

End
Round
Alternate

Coaches, if this is the
end of the contest,
please be sure to
collect team
calculators from the
competition table.