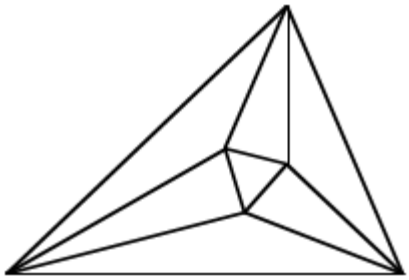
Meet 1 – Event A 2019-20



Questions are worth 2-2-2-4-4 points respectively.
No calculators allowed

_____ **1.** Evaluate.

$\sqrt{10^2}$

Fill in boxes _____ **2.** Fill in each box with the correct comparison symbol (<, >, =).

$0.09 \square \frac{1}{9}$ $1.23 \square \frac{123}{10}$

_____ **3.** In isosceles triangle ABC, the measure of angle A is 50°. What are **all** the possible measures, in degrees, for angles B and C?

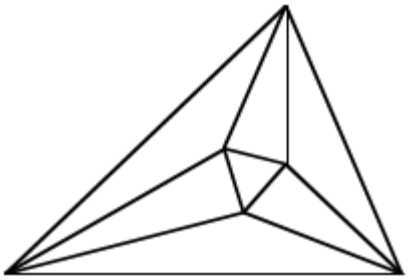
Add ( ) _____ **4.** Add **one pair** of parentheses to the expression so that it evaluates to 15.

$5 + 4 \times 7 - 3 + 6 \times 2$

$_____ **5.** A contest prize winner gets to draw one bill at a time from a bucket containing ten $20 bills, ten $50 bills, and ten $100 bills. The drawing ends when the contestant has 3 bills of the same denomination. What is the maximum amount of money that can be drawn?

Name_____ School_____

Meet 1 – Event A 2019-20



Answers

Questions are worth 2-2-2-4-4 points respectively.

10 **1.** .

See boxes **2.** .

1 point per box

$0.09 \boxed{<} \frac{1}{9}$ $1.23 \boxed{<} \frac{123}{10}$

50°, 65°, 80° **3.** Possibilities: 50-**50**-**80**, 50-**65**-**65**

No partial credit.
Must list all 3 measures for 4 points.
(Order does not matter. Degree symbol may or may not be included.)

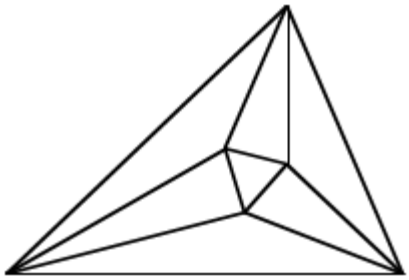
See ( ) **4.** .

No partial credit.
Must have both parentheses in correct locations for 4 points.

$5 + 4 \times 7 - (3 + 6) \times 2$

$440 **5.** The contestant must draw two $20 bills, two $50 bills, and three $100 bills.

Meet 1 – Event B 2019-20



Questions are worth 2-2-2-4-4 points respectively.
No calculators allowed

x = _____ **1.** Which value of *x* makes the equation true?

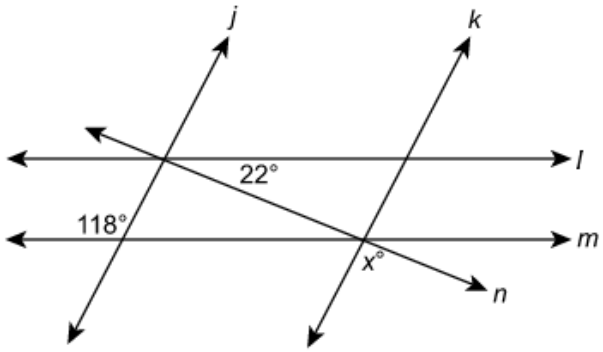
$$(3^3)^4 = 3^x$$

_____ **2.** Evaluate the expression.

$$3 - 8 \times 6 - (-13)$$

x = _____ **3.** In the diagram, lines *j* and *k* are parallel. Lines *l* and *m* are also parallel. Line *n* is a transversal.

What is the value of *x*?



_____ **4.** What is $\frac{3}{25} + 0.325$? Write your answer as a decimal and as a reduced fraction.

_____

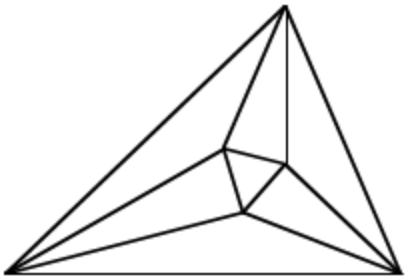
$ _____ **5.** A taxi driver charges $5.00 plus the amounts listed below.

- $0.30 per $\frac{1}{4}$ mile traveled
- $0.30 per minute the taxi is stopped

What is the cost of a 7.2-mile taxi ride that includes a 3-minute stop? Determine the cost based on the exact mileage.

Name_____ School_____

Meet 1 – Event B 2019-20



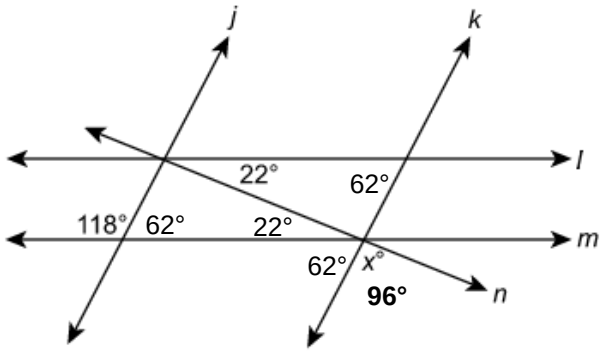
Answers

Questions are worth 2-2-2-4-4 points respectively.

___*x* = 12___ **1.** .

___-32___ **2.** $3 - 8 \times 6 - (-13) = 3 - 48 + 13 = -45 + 13 = \mathbf{-32}$

___*x* = 96___ **3.**



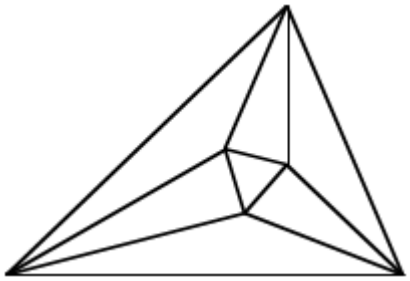
___0.445___ **4.** $\frac{3}{25} + 0.325 = \frac{3}{25} + \frac{325}{1000} = \frac{120}{1000} + \frac{325}{1000} = \mathbf{\frac{445}{1000}} = \mathbf{\frac{89}{200}}$

___89/200___

2 points for each correct response
(Order does not matter)

___$14.54___ **5.** $0.30 per ¼ mile = $1.20 per mile
5 + (1.2)(7.2) + 3(0.3) = 5 + 8.64 + 0.9 = **14.54**

Meet 1 – Team Event 2019-20

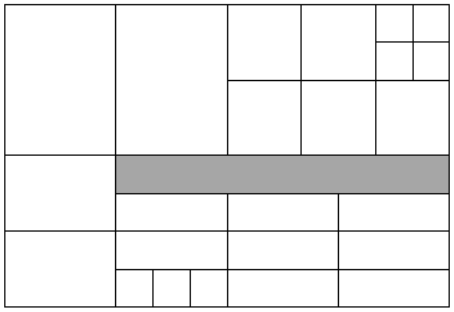


Questions are worth 4 points each.
No calculators allowed

_____ **1.** Evaluate: $\sqrt{81 + 144}$

_____ **2.** Let $m \phi n = m + n - mn$. What is the value of $7 \phi (1 \phi 10)$?

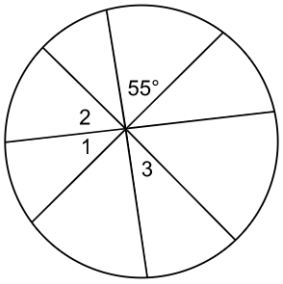
_____ mi **3.** Teri bikes 50 miles in 2 hours. Cam bikes 36 miles in 3 hours. At these rates, how many more miles will Teri bike than Cam when they each bike for 4 hours?



_____ **4.** The entire large rectangle represents 1 whole. Which fraction represents the shaded portion? *(Hint: The diagram is made to scale. If partitions appear to be equal, they are!)*

_____ **5.** A café has 8 soups, 14 sandwiches, and 7 drinks on its menu. Each day, the café offers a different combination of a soup, a sandwich, and a drink as its daily special. For how many days could the café offer a different daily special before it would have to repeat a previous daily special?

_____ **6.** Let $\Psi\ B = \frac{A}{B} + \frac{B}{A}$. What is the value of $0.1\ \Psi\ 2$? Write your answer as a decimal.



° _____ **7.** A circular diagram is shown. In the diagram, angles 1 and 2 are complementary. What is the measure, in degrees, of angle 3?

Add ( ) _____ **8.** An expression is shown twice. Add **one pair** of parentheses to **each** expression so that the value of the first expression is as large as possible and the value of the second expression is as small as possible.

as large as possible: $7 - 4 \times 8 - 2 + 5$

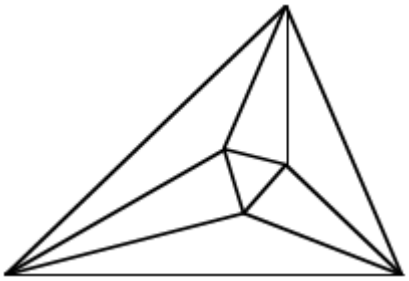
as small as possible: $7 - 4 \times 8 - 2 + 5$

_____ $^{mi}/_{min}$ **9.** A vehicle is traveling 45 miles per hour. What is the vehicle's speed in miles per minute?

_____ **10.** How many different 3-digit numbers can be formed using the digits 2, 4, and 7 if no digits appear more than once?

Name_____ School_____

Meet 1 – Team Event 2019-20



Answers

Questions are worth 4 points each.

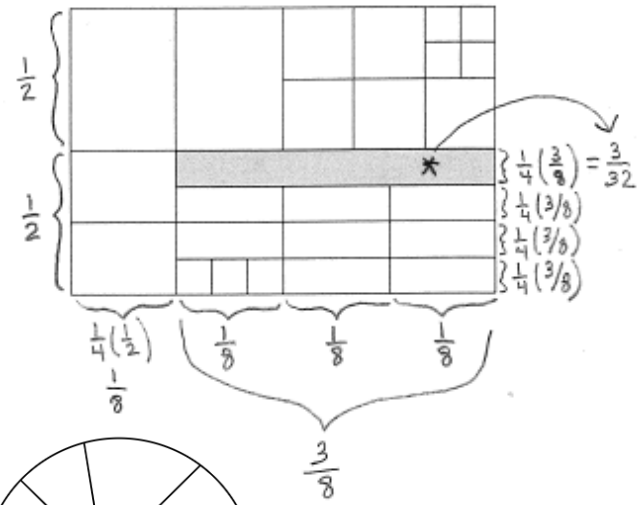
15 **1.** $\sqrt{81 + 144} = \sqrt{225} = \mathbf{15}$

1 **2.** 7 ϕ (1 ϕ 10) = 7 ϕ (1 + 10 – 1(10)) = 7 ϕ (1 + 10 – 10) = 7 ϕ 1
7 ϕ 1 = 7 + 1 – 7(1) = 8 – 7 = **1**

52 mi **3.** 50 miles in 2 hours = 25 mph; 36 miles in 3 hours = 12 mph
Teri: *d* = 25(4) = 100 miles; Cam: *d* = 12(4) = 48 miles
100 miles – 48 miles = **52 miles**

3/32 **4.** Basing the measurements on the smallest square (1×1) implies the entire rectangle measures 8×12. The shaded region measures 1×9. Therefore, 9/96 = **3/32**.

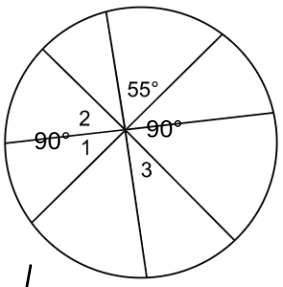
OR



784 **5.** 8 × 14 × 7 = **784**

20.05 **6.** $0.1\ \Psi\ 2 = \frac{0.1}{2} + \frac{2}{0.1} = \frac{1}{20} + \frac{20}{1} = \frac{1}{20} + \frac{400}{20} = \frac{401}{20}$
$401 \div 20 = \mathbf{20.05}$

35° **7.** 55 + 90 + "3" = 180; "3" = **35**



See ( ) **8.** .

2 points for each correct response
•Both ( ) in correct locations for large: 2pts
•Both ( ) in correct locations for small: 2pts

as large as possible: $(7 - 4) \times 8 - 2 + 5$

as small as possible: $7 - 4 \times (8 - 2 + 5)$

3/4 $^{mi}/_{min}$ **9.** 45 miles/hour × 1 hour/60 minutes = 45/60 miles/minute = **3/4 miles/minute**

Also accept:
0.75

6 **10.** 3 options for first digit, 2 options for second digit, 1 option for third digit
3 × 2 × 1 = **6**