

- 1** Which statement about the number 55,500 is true?
- A** The value of the digit in the tens place is 10 times the value of the digit in the hundreds place.
  - B** The value of the digit in the hundreds place is 10 times the value of the digit in the thousands place.
  - C** The value of the digit in the thousands place is  $\frac{1}{10}$  the value of the digit in the ten thousands place.
  - D** The value of the digit in the ten thousands place is  $\frac{1}{10}$  the value of the digit in the hundreds place.

2A

- 2** The number of jellybeans produced at a factory last week can be written in expanded notation as shown.

$$(7 \times 100,000) + (5 \times 10,000) + (5 \times 100)$$

How is this number written in standard form?

- F** 750,500    **G** 75,500    **H** 705,500    **J** 750,050

2B

- 3** Alvaro wrote a number.
- ◆ The digit in the tenths place was a 7.
  - ◆ The digit in the tens place was a 2.
  - ◆ The digit in the hundredths place was a 9.

What number could Alvaro have written?

- A** 6,279    **B** 20,904.79    **C** 247.09    **D** 325.79

2B

- 4** A beverage company produced 50,900,000 bottles of soda last year. What is the value of the 9 in this number?

- F** 900    **G** 900,000    **H** 90,000    **J** 9,000

2B

- 5** An internet company installed 25,708.05 feet of fiber optics cable. How is this number written in expanded notation?

- A**  $(2 \times 10,000) + (5 \times 100) + (7 \times 10) + (8 \times 1) + (5 \times 0.01)$
- B**  $(2 \times 10,000) + (5 \times 1,000) + (7 \times 100) + (8 \times 1) + (5 \times 0.01)$
- C**  $(2 \times 1,000) + (5 \times 100) + (7 \times 10) + (8 \times 1) + (5 \times 0.01)$
- D**  $(2 \times 10,000) + (5 \times 1,000) + (7 \times 100) + (8 \times 1) + (5 \times 0.1)$

2B

- 6** Nakeisha wrote the number shown.

37,720

The value of the 7 in the thousands place is how many times greater than the value of the 7 in the hundreds place?

- F** 70    **G** 100    **H** 7    **J** 10

2A

- 7** A teacher described a number using the clues listed.

- ◆ The value of the digit 6 is  $(6 \times 10)$ .
- ◆ The value of the digit 7 is  $(7 \times 1,000)$ .
- ◆ The value of the digit 5 is  $(5 \times 0.1)$ .

Which could be the number the teacher described?

- A** 7,369.5    **B** 7,065    **C** 7,164.05    **D** 765.0

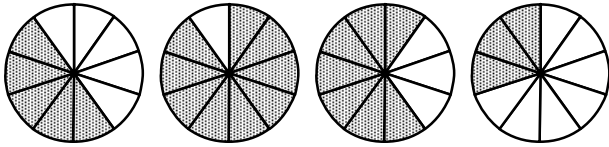
2B

- 8** Harshad wrote a number. One of the digits in the number was a 4 that had a value of  $(4 \times \frac{1}{10})$ . Which could be the number that Harshad wrote?

- F** 346.95    **G** 3,285.14    **H** 217.49    **J** 964.37

2B

1 These models are shaded to represent four different decimal numbers less than one.

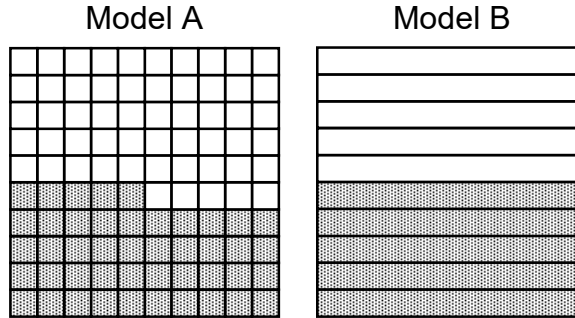


Which list shows these decimal numbers in order from greatest to least?

- A 0.3 0.5 0.7 0.9
- B 0.9 0.7 0.5 0.3
- C 0.7 0.5 0.9 0.3
- D 0.5 0.9 0.7 0.3

2F

3 Models A and B are shaded to represent decimal numbers less than one.

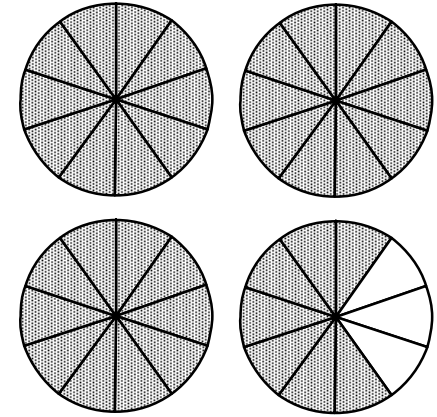


Which correctly compares the values represented by the models?

- A  $0.55 < 5.0$       C  $0.45 < 0.5$
- B  $0.45 > 0.5$       D  $0.55 > 5.0$

2F

6 The model is shaded to represent a decimal number less than four.

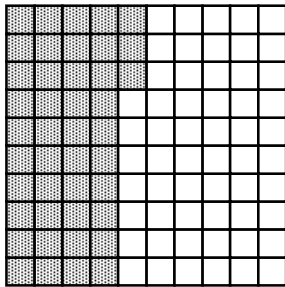


Which value is represented by the model?

- F 3.7      G 37.0      H 3.07      J 3.3

2E

2 Meredith shaded a model to represent a decimal number less than one.

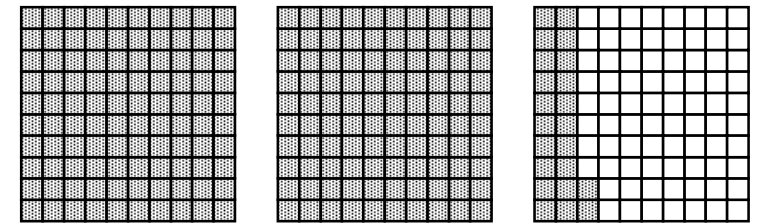


Which value is represented by the shaded part of the model?

- F Four and three tenths
- G Forty-three
- H Four and three hundredths
- J Forty-three hundredths

2E

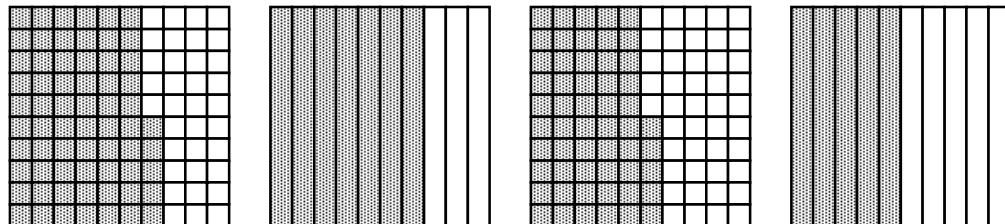
4 The model is shaded to represent a decimal number less than three. Which value is represented by the shaded part of the model?



- F 2.02      H 22.2
- G 2.22      J 2.78

2E

5 These models are shaded to represent four different decimal numbers.



Which list shows these decimal numbers in order from least to greatest?

- A 0.55 0.5 0.7 0.65      C 0.5 0.55 0.65 0.7
- B 0.7 0.65 0.55 0.5      D 0.5 0.7 0.55 0.65

2F

1 Which expression is equivalent to  $\frac{4}{5}$ ?

A  $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$

B  $\frac{1}{2} + \frac{1}{2} + \frac{1}{1}$

C  $\frac{2}{5} + \frac{3}{5}$

D  $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$

3A

3 Which expression is equivalent to  $\frac{7}{4}$ ?

A  $\frac{3}{3} + \frac{4}{4}$

B  $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$

C  $\frac{3}{2} + \frac{4}{2}$

D  $\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7}$

3A

5 Which expression is equivalent to  $\frac{6}{8}$ ?

A  $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{3}{2}$

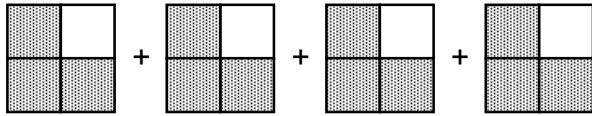
B  $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$

C  $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$

D  $\frac{2}{8} + \frac{2}{8} + \frac{2}{8} + \frac{2}{8}$

3A

2 This model is shaded to represent a number greater than one.



Which expression CANNOT be used to represent this number?

F  $\frac{5}{4} + \frac{4}{4} + \frac{3}{4}$

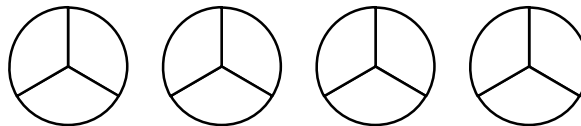
G  $\frac{3}{4} + \frac{3}{4} + \frac{3}{4} + \frac{3}{4}$

H  $\frac{3}{4} + \frac{4}{4} + \frac{3}{4} + \frac{4}{4}$

J  $\frac{6}{4} + \frac{6}{4}$

3B

4 This model can be shaded to represent the fraction  $\frac{10}{3}$ .



Which number sentence represents two different ways that  $\frac{10}{3}$  can be represented with shaded fractions on the model?

F  $\frac{3}{3} + \frac{3}{3} + \frac{3}{3} = \frac{1}{3} + \frac{5}{3} + \frac{2}{3} + \frac{2}{3}$

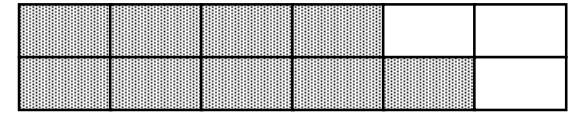
G  $\frac{3}{3} + \frac{4}{3} + \frac{3}{3} = \frac{2}{3} + \frac{2}{3} + \frac{4}{3} + \frac{2}{3}$

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

J  $\frac{3}{3} + \frac{4}{3} + \frac{5}{3} = \frac{2}{3} + \frac{3}{3} + \frac{4}{3} + \frac{1}{3}$

3B

6 Lauren shaded a model to represent a fraction.



Which shows two expressions that can represent Lauren's fraction?

F  $\frac{3}{12} + \frac{3}{12} + \frac{3}{12}$  and  $\frac{2}{12} + \frac{3}{12} + \frac{4}{12}$

G  $\frac{2}{12} + \frac{4}{12} + \frac{6}{12}$  and  $\frac{4}{12} + \frac{4}{12} + \frac{4}{12}$

H  $\frac{3}{12} + \frac{4}{12} + \frac{5}{12}$  and  $\frac{2}{12} + \frac{2}{12} + \frac{5}{12}$

J  $\frac{2}{12} + \frac{3}{12} + \frac{4}{12}$  and  $\frac{9}{12} + \frac{9}{12} + \frac{9}{12}$

3B

**1** A new store opened yesterday.

- ◆ During the first hour of business, 172 customers entered the store.
- ◆ During the second hour, 209 customers entered and 54 customers left.
- ◆ During the third hour, 236 customers entered and 117 customers left.

How many customers were in the store after the third hour of business?

- A** 446 customers
- B** 788 customers
- C** 464 customers
- D** 617 customers

4A

**3** Zachary's new apartment has 975.55 square feet of floor space. His bedroom takes up 142.8 square feet. How many square feet of the apartment's floor space is NOT bedroom floor space?

- A** 832.55 square feet
- B** 833.75 square feet
- C** 833.35 square feet
- D** 832.75 square feet

4A

**5** A herpetologist recorded the lengths of three snakes in the table shown.

Snake	Length (meters)
A	1.6
B	1.04
C	0.92

What is the difference between the length of Snake A and the length of Snake C?

- A** 2.52      **C** 0.56
- B** 0.68      **D** 3.56

4A

**2** Ms. Chang bought one pair of shoes that cost \$59.95 and 2 pairs of socks that cost \$7.29 each. What was the total cost of the shoes and socks?

- F** \$67.24
- G** \$73.33
- H** \$74.53
- J** \$127.19

4A

**4** The table shows three scores that are displayed on a video game at an arcade.

Player	Score
Latrice	901,385
Harish	865,437
Peter	842,694

How many points did Harish and Peter score combined?

- F** 1,766,822      **H** 1,717,131
- G** 1,708,131      **J** 2,609,516

4A

**6** Miranda brought a 20-dollar bill to a restaurant. She bought a salad for \$9.95, a drink for \$1.95, and a dessert for \$3.95. She gave the leftover money to the waiter. How much money did the waiter receive?

- F** \$5.85
- G** \$4.05
- H** \$5.05
- J** \$4.15

4A

1 At a fruit stand, watermelons cost 8 dollars each and cantaloupes cost 5 dollars each. Garrett has 20 dollars. Which set of equations can be used to find  $d$ , the number of additional dollars Garrett needs to buy 1 watermelon and 3 cantaloupes?

- |  |  |
|--|--|
| <b>A</b> $5 \times 3 = 15$<br>$8 + 15 = 23$<br>$23 + 20 = d$ | <b>C</b> $5 \times 3 = 15$<br>$8 + 15 = 23$<br>$23 - 20 = d$ |
| <b>B</b> $8 + 5 = 13$<br>$20 - 13 = d$                       | <b>D</b> $8 + 5 = 13$<br>$20 + 13 = d$                       |

5A

3 Mr. Rivera downloaded 2 movies and 15 songs to his tablet computer.

- ♦ He paid \$18 for each movie.
- ♦ He paid \$2 for each song.

Which set of equations can be used to find  $t$ , the total number of dollars Mr. Rivera paid for the downloads?

- |  |  |
|--|--|
| <b>A</b> $2 \times 18 = 36$<br>$15 \times 2 = 30$<br>$36 + 30 = t$ | <b>C</b> $2 \times 18 = 36$<br>$15 \times 2 = 30$<br>$36 - 30 = t$ |
| <b>B</b> $2 + 18 = 20$<br>$15 + 2 = 17$<br>$20 + 17 = t$           | <b>D</b> $18 \div 2 = 9$<br>$15 \times 2 = 30$<br>$9 + 30 = t$     |

5A

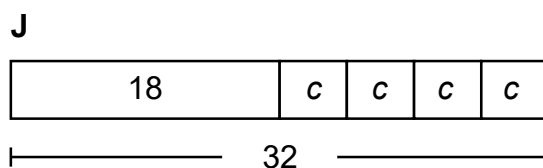
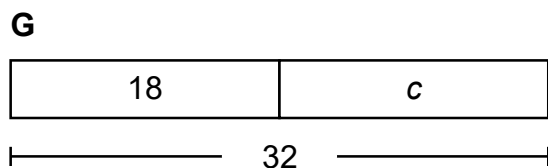
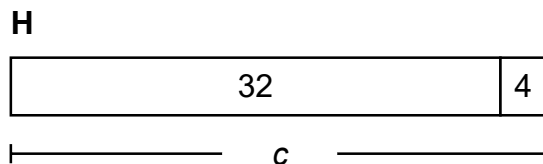
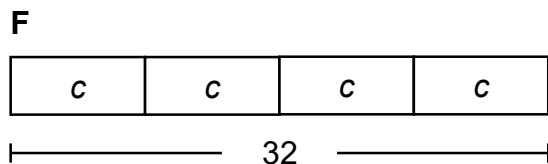
4 A dairy farmer milked 4 cows every day for 6 days. Each cow produced 768 fluid ounces of milk each day. Which equation represents  $m$ , the total amount of milk in fluid ounces that the cows produced during these 4 days?

- F**  $4 \times 768 = m$   
**G**  $4 \times 6 \times 768 = m$   
**H**  $4 \times 768 \div 6 = m$   
**J**  $4 + 6 + 768 = m$

5A

2 Kionna's new book has 32 chapters. She will read half of the chapters this weekend. She will read the rest of the chapters over the following 4 days. She will read the same number of chapters each day.

Which strip diagram shows a way to find  $c$ , the number of chapters Kionna will read during each of the 4 days following the weekend?



5 Lanying provided 5 trays of appetizers at her party.

- ♦ There were 12 appetizers on each tray.
- ♦ 3 appetizers were left over at the end of the party.

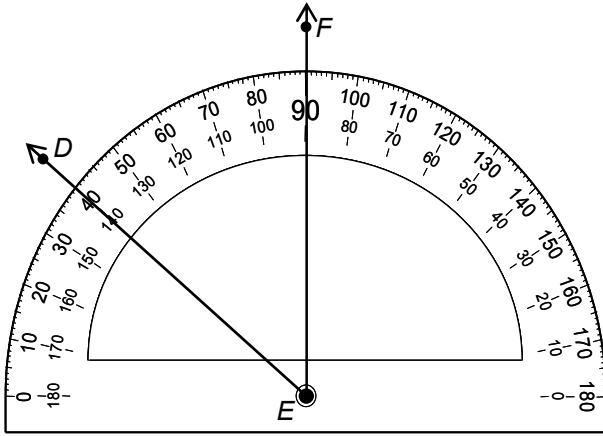
Which set of equations can be used to find  $n$ , the number of appetizers that were eaten at Lanying's party?

- |   |   |
|---|---|
| <b>A</b> $5 \times 12 = 60$<br>$5 \times 3 = 15$<br>$60 - 15 = n$ | <b>C</b> $5 \times 12 = 60$<br>$5 \times 3 = 15$<br>$60 + 15 = n$ |
| <b>B</b> $5 \times 12 = 60$<br>$60 - 3 = n$                       | <b>D</b> $5 \times 12 = 60$<br>$60 + 3 = n$                       |

5A

5A

1 Angle  $DEF$  is shown below.

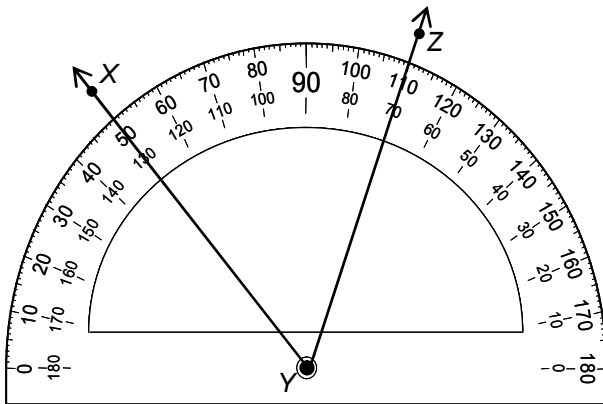


What is the measure of angle  $DEF$  to the nearest degree?

- A  $140^\circ$    B  $40^\circ$    C  $90^\circ$    D  $50^\circ$

7C

2 Angle  $XYZ$  is shown below.

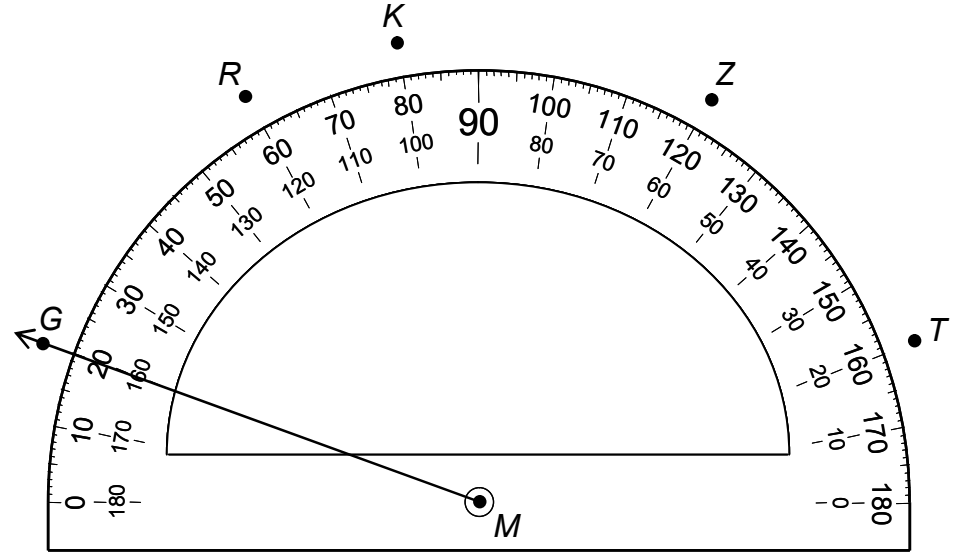


What is the measure of angle  $XYZ$ ?

- F  $60^\circ$    G  $110^\circ$    H  $50^\circ$    J  $130^\circ$

7C

3 Ray  $MG$  has been drawn on the protractor.

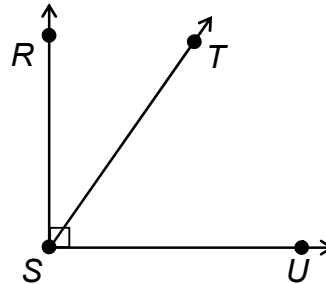


To construct an angle that has a measure of  $60^\circ$ , another ray can be drawn that starts at point  $M$  and passes through which point?

- A Point  $R$    B Point  $K$    C Point  $Z$    D Point  $T$

7D

4 The measure of angle  $RSU$  equals  $90^\circ$ .

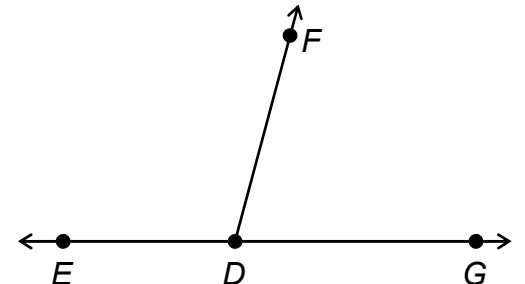


Angle  $RST$  measures  $35^\circ$ . What is the measure of angle  $TSU$ ?

- F  $45^\circ$    G  $65^\circ$    H  $55^\circ$    J  $25^\circ$

7E

5 On the diagram shown, angles  $EDF$  and  $FDG$  equal  $180^\circ$  combined.



Angle  $EDF$  measures  $105^\circ$ . What is the measure of angle  $FDG$ ?

- A  $65^\circ$    B  $95^\circ$    C  $75^\circ$    D  $115^\circ$

7E