

**REGENTS COMPETENCY TEST**

# **MATHEMATICS**

**Friday, June 18, 2004 — 9:15 a.m.**

**1** Write the numeral for five thousand ninety-two.

**2** Add:

$$\begin{array}{r} 1421 \\ 3 \\ + 673 \\ \hline \end{array}$$

**3** What fractional part of the figure below is shaded?



4 José has \$20.00. What is the greatest number of packages of notebook paper he can buy if each package costs \$3.00?

**5 Subtract:**

**5000**

**3876**

**6** Subtract 25.7 from 42.3.

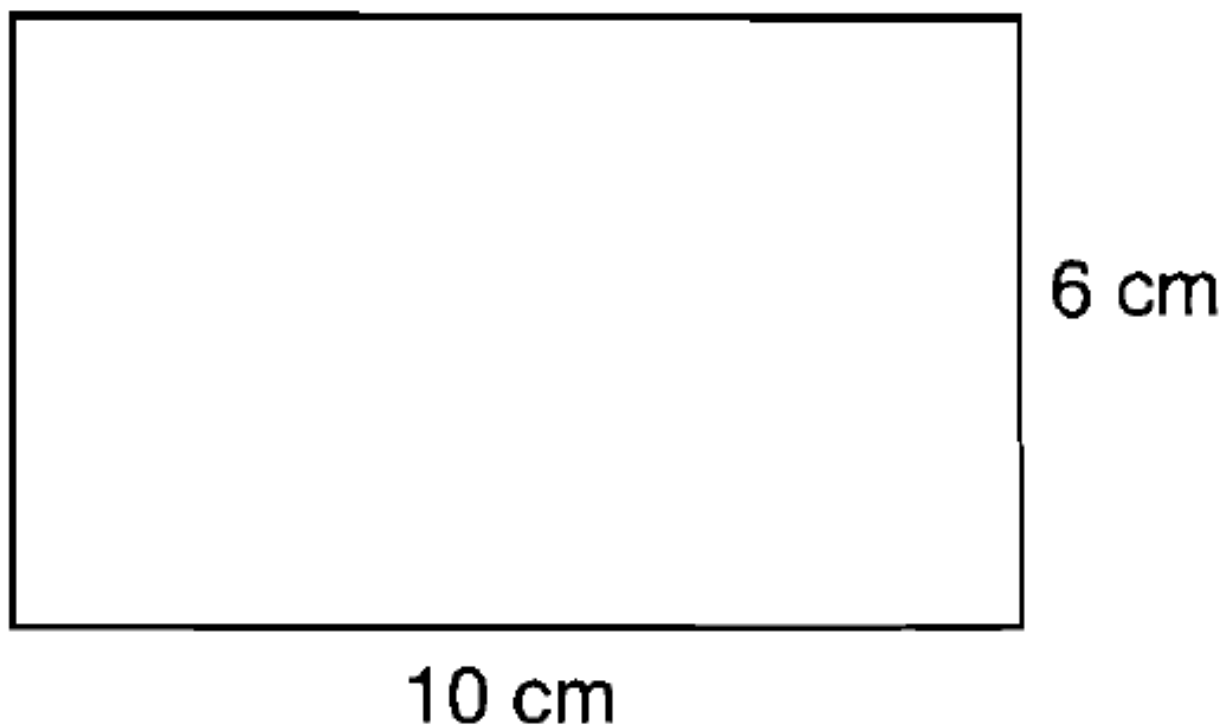
- 7 Allyson wants to buy a television that costs \$350. She agrees to make a downpayment of \$50 on the purchase and pay the remaining balance in monthly installments of \$60 each. How many monthly installments must Allyson make to pay for the television?



**8** Multiply:

$$\begin{array}{r} 307 \\ \times 56 \\ \hline \end{array}$$

**9** What is the number of centimeters in the perimeter of the rectangle below?



**10** Add:  $(-10) + (4)$

**11** What is the mode of the following group of numbers?

3, 8, 2, 9, 8, 8, 7, 3

**12** Divide:  $1.3 \overline{)1.69}$

**13** Listed below are Ted's biology test scores for 1 month. What was Ted's mean (average) test score in biology that month?

60, 72, 80, 80, 98

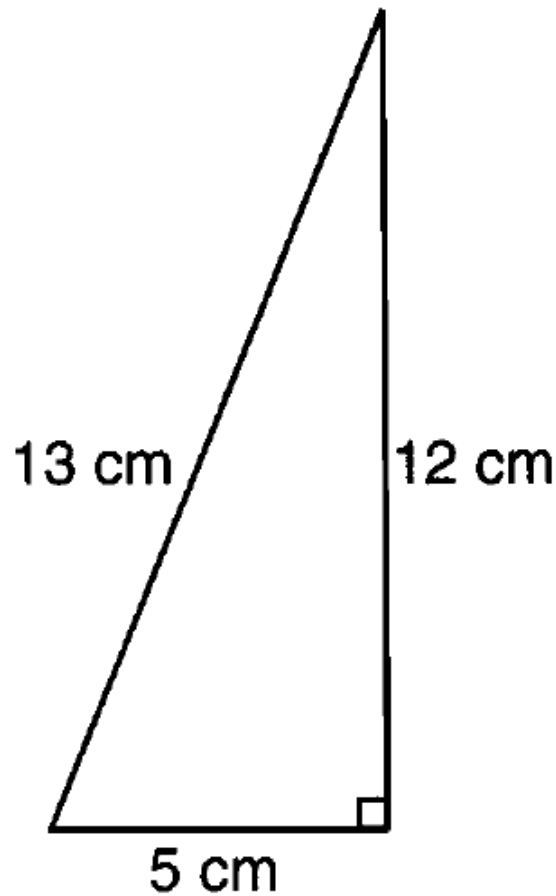
**14** Solve for  $p$ :  $7p - 3 = 18$

**15** Reduce  $\frac{48}{60}$  to lowest terms.



**16** Find the sum of  $\frac{1}{8}$  and  $\frac{2}{3}$ .

**17** What is the number of square centimeters in the area of the triangle shown below?





**18** If the probability that it will rain is  $\frac{3}{10}$ ,  
what is the probability that it will *not* rain?

**19** Subtract:

$$\begin{array}{r} 8 \\ 2\frac{1}{5} \\ \hline \end{array}$$

**20** Given the formula  $A = \frac{1}{2}h(b + c)$ .

If  $h = 8$ ,  $b = 5$ , and  $c = 2$ , what is the value of  $A$ ?

**21** Add:  $3.15 + 6.5 + 0.38$

(1) 3.18

(2) 4.18

(3) 9.03

(4) 10.03

**22** On a map, 1 inch represents 25 miles. How many miles are represented by 5 inches?


(1) 1

(2) 5

(3) 25

(4) 125



**23** On a pictograph, each  represents 100 acres of forest. How many of these symbols are needed to represent 450 acres of forest?

(1)  $4\frac{1}{2}$

(3) 100

(2)  $5\frac{1}{2}$

(4) 450

**24** Which fraction is equivalent to  $2\frac{7}{9}$ ?

(1)  $\frac{25}{9}$

(3)  $\frac{18}{9}$

(2)  $\frac{23}{9}$

(4)  $\frac{16}{9}$

**25** If Tyrisha earns \$7.50 an hour, how much will she earn in 12 hours?

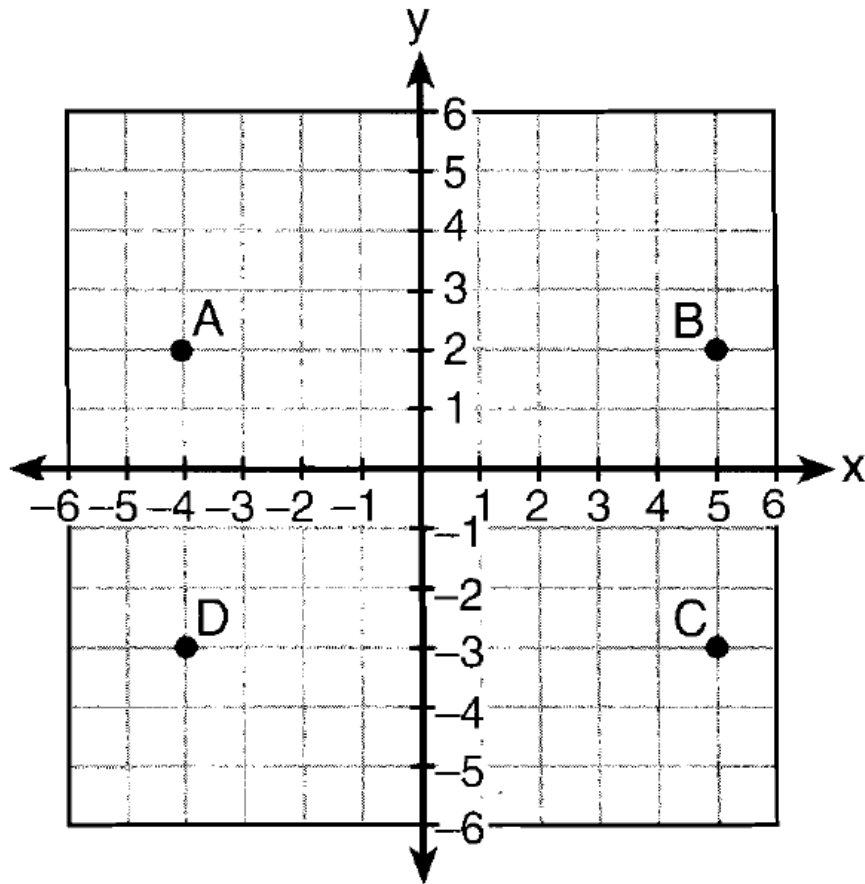
(1) \$60

(3) \$90

(2) \$75

(4) \$105

**26** On the graph below, which letter is located at coordinates  $(5,2)$ ?



**27** When 145 is divided by 4, what is the remainder?

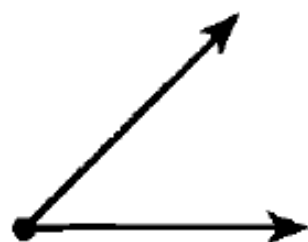
(1) 1

(2) 10

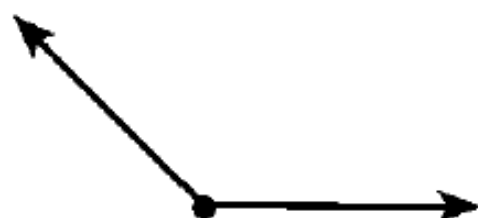
(3) 144

(4) 4

**28** Which figure best represents a right angle?



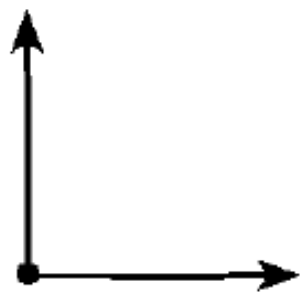
( 1 )



( 3 )



( 2 )



( 4 )

**29** If a train travels at an average speed of 80 miles per hour, how many miles will it travel in 8 hours?

(1) 10

(2) 88

(3) 640

(4) 648

**30** What is a value of  $\sqrt{64}$ ?

(1) 8

(2) 16

(3) 32

(4) 4



**31** What is the best approximation for 302 times 487?

(1) 12,000

(3) 1,200,000

(2) 150,000

(4) 1,500,000

**32** Solve for  $x$ :  $\frac{3}{5} = \frac{x}{20}$

(1) 15

(2) 12

(3) 9

(4) 4

**33** The distance between two cities is approximately 257 miles. What is this distance rounded to the nearest 10 miles?

(1) 200 miles

(3) 260 miles

(2) 250 miles

(4) 300 miles

**34** What is the least common denominator of the fractions  $\frac{1}{2}$ ,  $\frac{1}{4}$ , and  $\frac{1}{5}$ ?

(1) 8

(3) 20

(2) 10

(4) 40

**35** Which is *not* a prime number?

(1) 25

(2) 19

(3) 13

(4) 7

**36** Nicole had \$120 in her checking account. She deposited \$50 and then wrote a check for \$30. What was the new balance in her account?

(1) \$100

(2) \$200

(3) \$140

(4) \$40

**37** The temperature at noon was  $+2^{\circ}\text{C}$ . The temperature had dropped 6 degrees by 2 p.m. What was the temperature at 2 p.m.?

(1)  $-8^{\circ}\text{C}$

(3)  $-4^{\circ}\text{C}$

(2)  $8^{\circ}\text{C}$

(4)  $4^{\circ}\text{C}$

**38** A card company pays its salespeople a commission of 15% on all sales. Paula sold \$350 worth of cards. What is the amount of her commission?

(1) \$15.00

(3) \$335.00

(2) \$52.50

(4) \$525.00



**39** What is the value of  $6^3$ ?

(1) 9

(2) 18

(3) 42

(4) 216

**40** Maria bought ten 15-cent pencils. How much change should she have received from a 5-dollar bill?

(1) \$4.50

(2) \$3.50

(3) \$2.50

(4) \$1.50

**41** If four cans of lemonade sell for \$2.00, what is the cost of two cans?

(1) \$0.50

(3) \$1.50

(2) \$1.00

(4) \$4.00

**42** Jason spent  $1\frac{1}{2}$  hours practicing soccer each day for 5 days. What is the total number of hours Jason practiced?

(1)  $3\frac{1}{3}$

(3)  $6\frac{1}{2}$

(2)  $3\frac{1}{2}$

(4)  $7\frac{1}{2}$

**43** The original price of a skirt was \$30. The skirt is on sale for 15% off. What is the sale price?

(1) \$4.50

(3) \$34.50

(2) \$25.50

(4) \$45.00

**44** Which number is less than  $-3$ ?

(1)  $+1$

(2)  $-1$

(3)  $-4$

(4)  $+4$

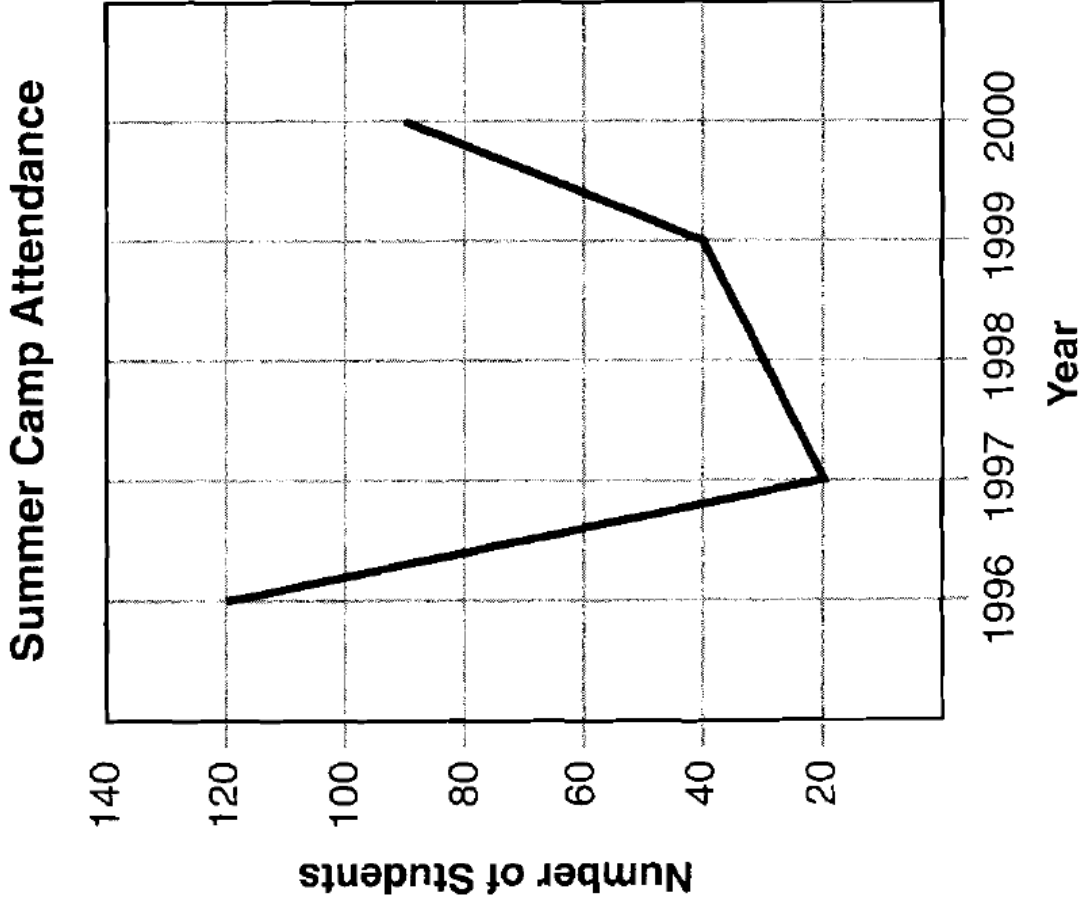
**45** What is the approximate length of a new pencil?

- (1) 18 centimeters      (3) 18 millimeters  
(2) 18 meters            (4) 18 kilometers





47 The line graph below shows the number of students attending a summer camp.



How many more students attended the camp in 2000 than in 1998?

- (1) 50
- (2) 60
- (3) 70
- (4) 80

**48** If the circumference of a circle is  $16\pi$ , what is the length of the radius?

(1) 16

(3) 8

(2) 2

(4) 4

**49** If the sales tax rate is 6%, what is the amount of sales tax on a coat that costs \$72?

(1) \$0.43

(2) \$4.32

(3) \$12.00

(4) \$43.20

**50** In a recent election for class president, Dave received 79 votes, and Carol received 91 votes. What is the ratio of Dave's votes to Carol's votes?

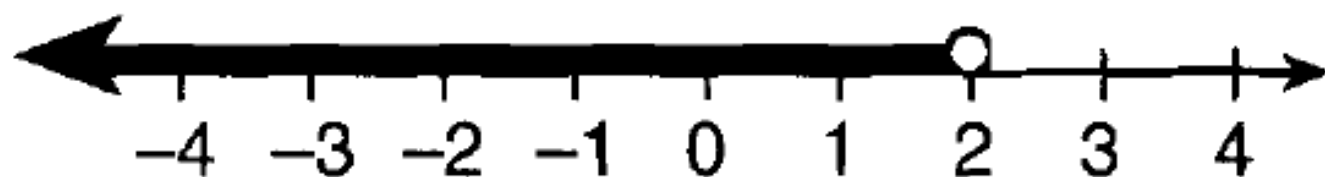
(1) 91:79

(3) 170:79

(2) 91:170

(4) 79:91

**51** Which inequality is shown by the graph below?



(1)  $x < 2$

(3)  $x \geq 2$

(2)  $x > 2$

(4)  $x + 2 > 0$

**52** Which is an algebraic expression for 7 decreased by 5 times a number?

(1)  $7 - 5x$

(3)  $\frac{5x}{7}$

(2)  $5x - 7$

(4)  $7 - x$

**53** In the number 82.34, which digit is in the hundredths place?

(1) 8

(2) 2

(3) 3

(4) 4

54 Sticks of candy cost 3 cents each. Which table shows this relationship?

Number of Sticks	Total Cost (cents)
0	0
2	6
4	12

(1)

Number of Sticks	Total Cost (cents)
0	0
2	4
4	8

(3)

Number of Sticks	Total Cost (cents)
0	3
2	3
4	3

(2)

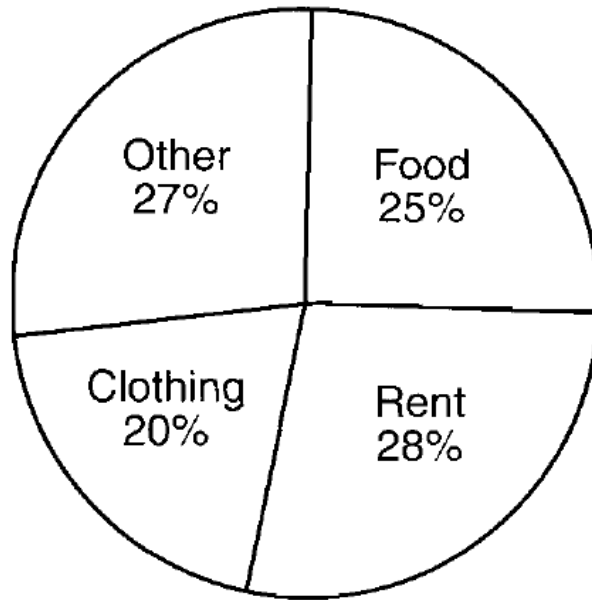
Number of Sticks	Total Cost (cents)
0	0
6	2
12	4

(4)



**55** The circle graph below shows how Stefan spent his salary of \$12,000 last year.

**Stefan's Expenses**



How much did he spend on food?

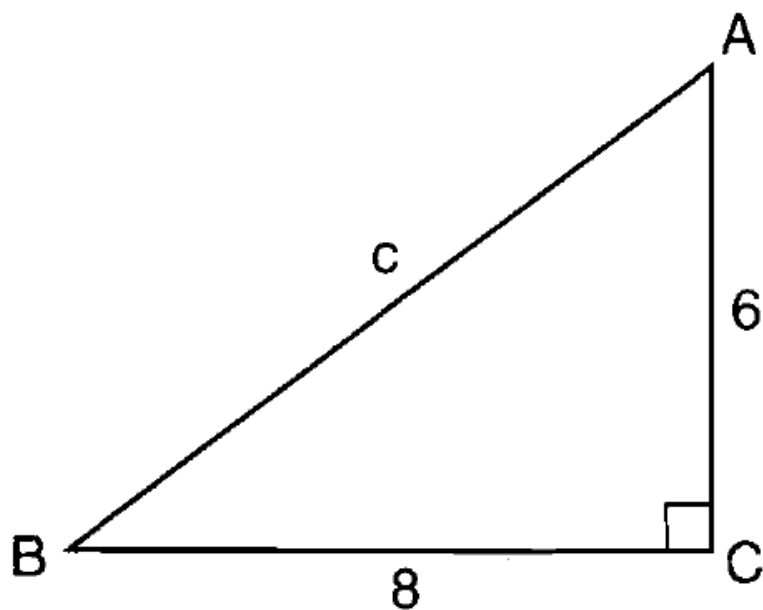
(1) \$2,500

(3) \$3,000

(2) \$6,000

(4) \$9,000

- 56 In the triangle below,  $AC = 6$  and  $CB = 8$ .  
What is the value of  $c$ ? [Use the formula  $a^2 + b^2 = c^2$ .]



- (1) 6  
(2) 10  
(3) 17  
(4) 43

**57** Katie took a test that had 72 questions. She got 18 questions wrong. What percent of the questions did she get wrong?

(1) 18%

(3) 72%

(2) 25%

(4) 75%

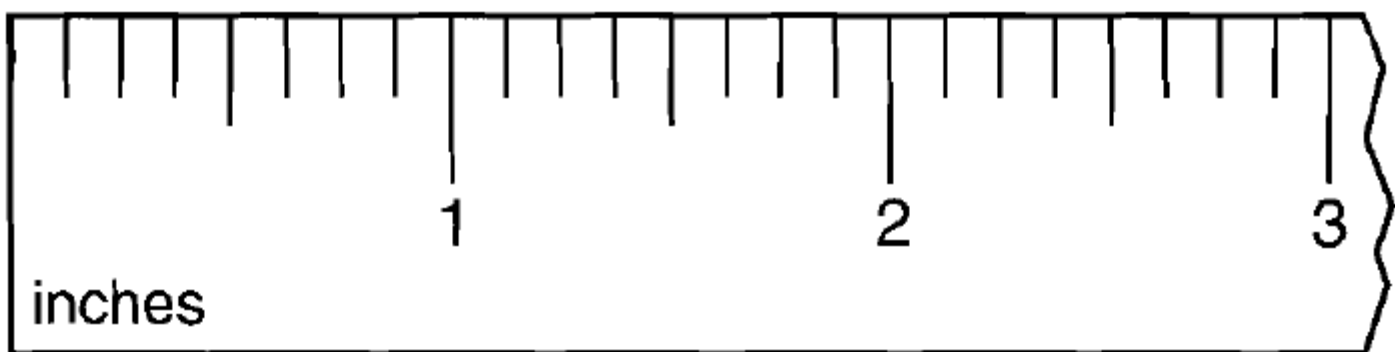
**58** Pat took a hike in the woods. She started her hike at 9:45 a.m. and finished at 2:15 p.m. How long did she hike?

- (1) 12 hours 30 minutes
- (2) 7 hours 30 minutes
- (3) 5 hours 30 minutes
- (4) 4 hours 30 minutes

**59** Which group of decimals is arranged from smallest to largest?

- (1) 0.3, 0.03, 3.0      (3) 3.0, 0.03, 0.3  
(2) 0.03, 3.0, 0.3      (4) 0.03, 0.3, 3.0

**60** What is the measure of the line segment below?



(1)  $1\frac{3}{8}$  in

(3)  $1\frac{3}{4}$  in

(2)  $1\frac{1}{4}$  in

(4)  $1\frac{1}{2}$  in