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WORKSHEET STANDARDS

Reading a Pattern Envelope

In order for student to be successful at creating a product, they need to understand and be able to analyze data necessary to complete a project.

NUMBER AND OPERATIONS STANDARD FOR GRADES 9–12

EXPECTATIONS

Instructional programs from prekindergarten through grade 12 should enable all students to—	In grades 9–12 all students should—
Understand meanings of operations and how they relate to one another	<ul style="list-style-type: none"> develop an understanding of properties of, and representations for, the addition and multiplication of vectors and matrices
Compute fluently and make reasonable estimates	<ul style="list-style-type: none"> develop fluency in operations with real numbers, vectors, and matrices, using mental computation or paper-and-pencil calculations for simple cases and technology for more-complicated cases.

DATA ANALYSIS AND PROBABILITY STANDARD FOR GRADES 9–12

EXPECTATIONS

Instructional programs from prekindergarten through grade 12 should enable all students to—	In grades 9–12 all students should—
Select and use appropriate statistical methods to analyze data	<ul style="list-style-type: none"> for univariate measurement data, be able to display the distribution, describe its shape, and select and calculate summary statistics;
Develop and evaluate inferences and predictions that are based on data	<ul style="list-style-type: none"> understand how sample statistics reflect the values of population parameters and use sampling distributions as the basis for informal inference;

PROCESS STANDARDS

Problems Solving, Communications, Connections, Representations

FAMILY AND CONSUMER SCIENCES STANDARDS

Comprehensive Standard:

16.0 Integrate knowledge, skills, and practices required for careers in textiles and apparels.

Content standard:

16.4 Demonstrate skills needed to produce, alter, or repair fashion apparel, and textile products.



Math *in* Design WORKSHEET

name: _____

Reading a Pattern Envelope

PATTERN ENVELOPE INFORMATION

Size	8	10	12	14	16	18	20	22	24
Jacket									
45*/**	$2\frac{3}{4}$	$2\frac{3}{4}$	$2\frac{3}{4}$	$2\frac{3}{4}$	$2\frac{3}{4}$	$2\frac{7}{8}$	$2\frac{7}{8}$	$2\frac{7}{8}$	$2\frac{7}{8}$
60*/**	2	$2\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{5}{8}$
Vest									
45*/**	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{5}{8}$	$1\frac{5}{8}$	$1\frac{5}{8}$	$1\frac{3}{4}$
60*/**	$1\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$
Top									
45*/**	2	2	$2\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{3}{8}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$
60*/**	$1\frac{5}{8}$	$1\frac{5}{8}$	$1\frac{5}{8}$	$1\frac{5}{8}$	$1\frac{3}{4}$	$1\frac{3}{4}$	$1\frac{3}{4}$	$1\frac{3}{4}$	$1\frac{7}{8}$
Skirt									
45*/**	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$
60*/**	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$
Pants									
45*/**	$2\frac{5}{8}$	$2\frac{5}{8}$	$2\frac{5}{8}$	$2\frac{5}{8}$	$2\frac{5}{8}$	$2\frac{5}{8}$	$2\frac{5}{8}$	$2\frac{5}{8}$	$2\frac{5}{8}$
60*/**	$1\frac{3}{4}$	$1\frac{3}{4}$	$2\frac{1}{8}$	$2\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{3}{8}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$

DIRECTIONS: Using the chart answer the following questions:

- Jane is going to make the following items: jacket size 12, top size 12, and pants size 14.
 - How much 45" wide fabric will you need to make all three items?
 - The fabric cost is \$5.99 a yard. How much will the fabric cost to make all three pieces?



Math *in* Design

Reading a Pattern Envelope CONTINUED

2. You have decided to make the skirt in a size 12 and the vest in a size 10 using a different fabric. The fabric that you have chosen is 45" wide.
 - a. How much fabric will you need for both items?
 - b. The fabric is \$10.59 a yard. How much will the fabric cost for these two garment pieces?
 - c. You have a coupon for 15% off on the fabric. How much will you save using the coupon?
 - d. What will be the cost for the fabric?

3. Your friend Sara would like you to make her an outfit using the same pattern. She wants a jacket size 14, vest size 12, and skirt size 16. The fabric she has chosen is 60" wide.
 - a. How much fabric will you need to make all three garment pieces?
 - b. The fabric that she has chosen is \$7.89 a yard. How much will the fabric cost for her garment pieces?
 - c. Sara has a coupon for 40% off/yard. What is the cost of her fabric per yard?
 - d. What is the total cost of Sara's fabric?
 - e. How much money did Sara save by using a coupon?



Math *in* Design

Reading a Pattern Envelope CONTINUED

Other items needed to complete your sewing project:

Spool of Thread	\$2.79	The jacket requires 3 buttons, the vest
Buttons	3/\$2.99	3 buttons, the top 5 buttons, the pants
Zipper	\$2.99	and the skirt both need a zipper.
Pattern Cost	\$10.99	

4. What will be the total cost of Jane's project including all of the items needed to complete the garment pieces? (jacket, top, pants)
5. What will be the total cost of Sara's project including all of the items needed to complete the garment pieces? (jacket, vest, skirt)